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PAPER TR
JOURNA

Vol. LXXXVI, No. 4 JANUARY 26, 1928

ZELLSTOFFFABRIK WALDHOF

MANNHEIM-WALDHOF
GERMANY

Mills at	Daily Capacity
Mannheim-Waldhof	800 Tons
Tilsit (East Prussia)	Bleached
Ragnit (East Prussia)	and Unbleached
Kelheim (Bavaria)	Sulphite Pulp

Sole Agents for the U. S. A.

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will give you a definite and
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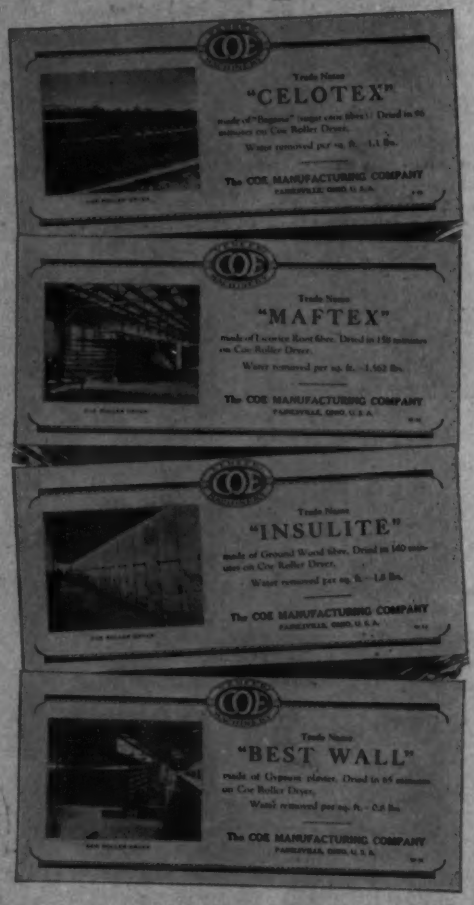
Equipment for this purpose.



The illustration on the right presents four of the many nationally-known boards that are dried on the

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Builders of Dryers for Celotex, Insulite, Sheetrock, Best Wall, Beaver Board, and Many Other Nationally Advertised Boards.

The Coe Continuous Roller Dryer for Boards eliminates the inefficiency and waste of drying rooms and tunnel kilns. Boards are delivered perfectly flat and free from defects in a fraction of the time required by less modern methods. Let us show some of the operating advantages of the Coe Continuous Roller Dryer. Use the coupon and get Bulletin 104-O.

The Coe Manufacturing Company,
Painesville, Ohio.

☐ Give me information as to how I can use the Coe Experimental Laboratory.
☐ Send me Bulletin 104-O describing Coe Dryers in detail.
☐ You may have a Coe "Dryer Specialist" call on me.

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Individual .....
City ..... State .....

Entered as second class matter August 13, 1925, at the Post Office at East Stroudsburg, Pa., under Act of Congress of March 3, 1879. ESTABLISHED 1872 FIFTY-SIXTH YEAR Published every Thursday by the Lockwood Trade Journal Co., at 34 N. Crystal St., E. Stroudsburg, Pa. EXECUTIVE AND EDITORIAL OFFICES: 10 East 39th STREET, NEW YORK CITY. CHICAGO: 123 West Madison Street, Chicago, Ill.

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PAPER TRADE JOURNAL
ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-SIXTH YEAR

Published Every Thursday by the

LOCKWOOD TRADE JOURNAL CO., Inc.

LESLIE R. PALMER, President — GEO. S. MACDONALD, Vice-President & Treas. — F. K. HOPPIE, Secretary

Executive and Editorial Offices: 10 East 39th Street, New York
Chicago Office: Room 14, Suite 410, 123 West Madison St.

TABLE OF CONTENTS

Copyright, 1928, by Lockwood Trade Journal Co., Inc.

More News Print Mergers in Canada 19
Better Conditions in Philadelphia 20
Lang Paper Co. Incorporates in New Jersey 21
Paper Trade Association Elects Officers 21
To Build Big Paper Mill Near Seattle 21
Great Lakes Mill Nears Completion 22
Howard Smith Company's Good Showing 22
Abitibi Loses Mill Manager 22
Paraffine Companies to Retire $615,000 23
Reforestation Bond Issue Hearing 23
Nekoosa-Edwards Doubles Stock 24
W. C. Wing Heads Nicolet Paper Co. 24
Ground Wood Prices Advance in Norway 24
Chicago Paper Conditions Improving 26
Good Will Gathering at Finch Pruyn Plant 26
Sacramento Pulp & Paper Co. Formed 26
Program for Paper Week 28
Important Freight Rate Case Hearing 28
Goes With Beecher-Peck & Lewis 28
Construction News 30
Metropolitan Bag Jobbers to Meet 32
New Eagle-A Carton Crate Packing 34
Power Plant Section **36**
New York Trade Jottings 42
Editorial **44**
Pulp and Paper Pacific Northwest 45
Technical Section
Textile Fabrics from Paper 47
Handling of 100 Per Cent Sulphite Sheet 49
Old Papers and Their Recovery 49
Paper Machine Drives and Rosin Size 49
New Sampling Borers 50
U. S. Patents on Paper Making 51
Paper Research During 1927 52
Cost Section **57**
Obituary 62
Imports of Paper and Paper Stock 64
New York Market Review **68**
Miscellaneous Markets **70**
Market Quotations **72**

THE PAPER TRADE JOURNAL is indexed in Industrial Arts Index

Want and For Sale Advertisements 77, 78, 79, 80, 81

You can now Talk from Coast to coast for only $9

An Advertisement for Bell Long Distance Telephone Service

On December 1, 1927, telephone rates on calls to points 390 miles or more away were again substantially reduced. The day station to station rate from coast to coast is now only $9. Other typical station to station day rates are: Baltimore to Los Angeles, $8.25. Seattle to Chicago, $6.50. Denver to New York, $6.00. Atlanta to San Francisco, $7.75. Cleveland to Omaha, $3.25. Minneapolis to St. Louis, $2.30. Night rates—less.

The greater the distance, the greater the saving by these new rates—in long trips, time and expense.

Says a large fruit, vegetable and produce house, "All of our buying is done by Long Distance."

An automobile manufacturer, "It reduces distance to nothing, and gives us an opportunity to talk with our dealers . . . just as though they were at the plant."

A large paper company, "Telephone selling has become a necessity. Hours are saved this way. Selling cost reduced."

What distant call now would make a needed appointment, close a pending purchase or make a sale? Calling by number takes less time. . . . . *Number, please?*

ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

Vol. LXXXVI, No. 4 — PAPER — Thursday, January 26, 1928

More News Print Mergers Possible in Canada

According to Rumors, One or Other of Existing Large Combines Is Reported to be Negotiating for Practically Every Independent Organization—Consolidation of Abitibi and Spanish River Interests Now Accomplished Fact—New Issue Announced for Organization Which Takes Over Donnacona Paper Co.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., January 23, 1928.—The amalgamation of Donnacona Paper with Price Bros. & Co., and the amalgamation of the St. Lawrence Valley Corporation with the Laurentide Company, with which the New Year has started in Canada, has given rise to another crop of rumors regarding possible further consolidations, and at the present there is not a single independent or semi-independent company in Canada whose name is not being brought into the picture of one or other of the existing large combines. Meanwhile the merger of the Abitibi and Spanish River Companies has become an accomplished fact, over 97 per cent of the common shares of the subsidiaries having been turned in for exchange into Abitibi stock. The announcement is made of an issue of $4,000,000 of 6 per cent gold debentures to finance the new company which, controlled by the Price company, will take over the Donnacona Paper Company.

Brompton's New Issue

The Brompton Pulp and Paper Company has made arrangements to issue 10,000 treasury shares, increasing the total of no par shares outstanding from 140,000 to 150,000. The new capital is to be used for financing the completion of the news print mill at Bromptonville and the extensions and improvements at the company's East Argus plants.

Wood Preservers to Meet

The 24th annual meeting of the American Wood Preservers' Association will be held in Montreal on Wednesday, Thursday and Friday of the present week, and it is expected that a large proportion of the 750 members will attend. O. C. Steinmayer will deliver the President's address, and another address will be given by the Hon. Charles Stewart, Minister of the Interior for Canada. E. Bateman will discuss the factors to be considered in the testing of preservatives, R. C. Reeve will give an address on the toxity of wood preservatives, and J. D. MacLean will speak on the relation of the treating of variables to the penetration and absorption of preservatives into wood.

Reported Merger of Fine Paper Mills

Apparently the trend towards consolidation is extending from the news print to the fine paper fields. This is indicated by a report that negotiations are afoot for the absorption of the Rolland Paper Company, Ltd., by the Provincial Paper Mills, Ltd. The former is practically a family concern, but is the oldest manufacturer of fine papers in Canada, and has built up an outstanding reputation for its products. As Rolland Paper produces several grades which are not manufactured by Provincial Paper, an amalgamation of the two would serve to round out the organization and give it a more varied line of products.

New Paper Mill at Winnipeg

According to present plans, the plant of the Great West Paper Mills Company, Ltd., at St. Boniface, Winnipeg, will be in operation within three months. M. R. Ware, of Baltimore, engineer in charge of the project, will be managing director and superintendent. The plant, when in operation, will be valued at $300,000, and will operate one unit machine, with a 25-ton daily capacity. Waste paper from city offices will be used for the manufacture of box board and building paper, and as the business grows a second unit of the same or larger capacity will be added to the plant. Some pulp will be used in addition to the waste paper, since corrugated board or paper requires wood pulp for greater strength.

Experts the Most Frequently Injured

The Abitibi Power and Paper Company's local journal, "The Broke Hustler," gives a report on accidents to the company's workmen during the year that contains some highly interesting features. For instance, the report states:

"Each year the record of the men who are injured is reported to show how long they have been on the particular job in which they are hurt. The record in 1927 again shows that the old employee becomes careless and is the one that is most frequently injured. Of the 118 accidents, 78 men injured had been over a year on the job on which they were hurt, some of them for several years; 13 had been less than a year but over 6 months; 15 had been less than 6 months and over 3 months; 5 had been less than 3 months and over 1 month; and 7 were under 1 month on the job. Of the latter, one man had been less than a day on the job when he was injured. The record for the past two years shows conclusively that it is not the man who is new on the job who gets hurt, it is the man who becomes so accustomed to the mill and its machinery that he becomes over-confident and takes chances."

It is further found that "with the exception of those departments where the work was exceedingly heavy there is practically no sign of fatigue entering into the cause of our accidents."

Another fact established is that in analyzing the accident figures for the past four days it is clearly established that Friday is the most unlucky day, with Thursday next, then Wednesday, then Monday, then Saturday, then Tuesday, with Sunday the lowest in number of accidents.

Better Conditions Looked For in Philadelphia

Local Dealers Report Demand Fairly Active, Although Stock Taking Retards Forward Movement of Market—While Seasonal Request for Fine Paper Grades and Coarse Specialties is Below Normal, Local Mills Are Gradually Becoming More Active

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., January 23, 1928.—While a few dealers have been reporting a fairly active demand, the majority claim that present inventory taking prevents the forward movement of the market. Inquiries have been frequent and indicate that a buying era may be expected soon. The local mills are more active, though there is still lacking the normal seasonal demand for many of the fine paper grades and specialties in the coarse lines. While those mills producing paper boards for the box and allied trades are slowly filling up their order list, the manufacturers of building boards, roofings and composition specialties for the building trade are enjoying a more encouraging market in anticipation of the coming spring construction work. Prices of boards for the paper box trade are now at $45 for chip and $47.50 quoted for news, a reduction of $2.50 from the prices of last month.

Fine paper dealers are confined to a limited demand for a few of the grades needed for manufacturing stationery supplies or for announcements in high grade advertising specialties and book papers by the larger publishing and printing houses bought under contract. Commercial printers are marking time along with many other industries and consequently their purchases of paper are confined to small lot needs of the day to day type.

New Fine Papers Being Sent In Samplers

Now that the mills are preparing to resume operations along normal lines, new fine papers are being shown to the trade by leading manufacturers as additions to the lines in covers, book grades and writing papers. A few of these new ideas in fancy covers and book papers were shown during the week as the distributors were allotted mill samplers of the 1928 additions for circulation among the consumers. New covers to correspond with former lines of book papers in the latest of colorings were among the innovations in some mills while modern and new ideas in colors and texture were other developments in writing papers and book grades and these will be ready for distribution with the coming month.

Paper House of Pennsylvania Wins Ad Prize

Recognition of the exhibit made by the Paper House of Pennsylvania was the outstanding feature of the trade in the week, when the Poor Richard Club bestowed the award for the best display of paper on that fine paper distribution firm at its Fourth Annual Exhibition held at the Bellevue Stratford Hotel. The exhibit included hundred of specimens of ad matter by the large number of advertising, paper, printing, photo-engraving and photograph firms enrolled in the ranks of the advertising fraternity as numbered in the membership of the Poor Richard Club. These yearly exhibits are held in conjunction with the annual banquet and celebration of the three days' program which it includes for the promotion of fellowship among the allied industries and their associates in the ad field. Featuring the Strathmore line of paper exclusively, the Paper House of Pennsylvania not only developed a unique touch in its display but gave wide exploitation to the splendid assortment of papers and rich colorfulness of the fine papers made by the Strathmore Paper Company. There were three boards devoted to the display of the prize winning exhibit of more than half a hundred pieces that made up each of the twelve different lines of varied colors and grades of the Strathmore cover and book papers and announcement stocks adapted for the advertising and printing trades.

Lindsay Paper Co. Display

In the display made by the Lindsay Paper Company there was featured the entire assortment of papers made by the Appleton Coated Paper Company, Appleton, Wis., and distributed in this city through the firm which recently acquired the agency for these mills. They included the Direct Sales Bonds and various enamel book papers under the Purity, Polychrome, Masterfold Enamels and the Woodbine Enamel in colors—all made by the Appleton Company. The Woodbine Embossing Cover papers also were included in the exhibits assembled from actual advertising specimens made throughout the year of 1927 by the mills. The manufacturers cooperated with the local paper distributors in providing the displays of its products, comprising two boards.

Japan Paper Co. Panels

Panels of high grade imported papers were featured at the Poor Richard exhibit by the Japan Paper Company, in its international trade display embracing 16 nations and their paper products. Under the direction of the local manager, Warwick C. Miller, papers from the Orient, Europe and other foreign manufacturers were assembled with the most attractive grades and richest of paper supplies of the various nations exhibited in striking contrast to the domestic products. Papers adapted for ad announcements, for richly designed display matter or printed forms where a unique background was desired were shown in the numerous lines of imported stocks garnered from all over the globe by the Japan Paper Co.

Champion Coated Paper Co. Shows Ad Papers

Including a wide assortment of coated papers used by the advertising and printing trades for direct mail purposes the Champion Coated Paper Company arranged its duo of boards with practical papers suitable for postal usage where a durable and yet striking product was required. The assortment of papers was gathered from direct mail campaigns by national advertisers and was provided from the specimens accumulated by the local manager of the Champion company, Charles A. Labor.

New Trend of Papers From A. M. Collins Mfg. Co.

Under the title "The New Trend in Papers Originating in Philadelphia," the A. M. Collins Company gave prominence to its line of papers that were placed on the market during the past year. Among the exhibits were the Laidtone Translucent, Laidtone Book, Fabratone Translucent and Laidmark Cover papers. Three of the Leather-like Cover papers made by that company were displayed in the Castilian, Algerian and New Librarian brands.

Raymond and McNutt Displays

From the local fine paper distributors of the Worthy Paper Company, Dill and Collins Company and the Strathmore Paper Company—the Raymond and McNutt Company—a wide range of products in papers for ad and printed matter were assembled in actual specimens of workmanship among the allied trades. The Worthy Paper Company's Georgian book and cover papers were featured on panels with the Dill and Collins Dulbrite make, while the Strathmore grades were featured on a separate board in practical demonstration of their adaptability to high class ad matter.

Cherry River Paper Co. To Elect New President

Following the death of James W. Oakford, on January 1, there will be called a special meeting of the officials of the company to elect a president to the Cherry River Paper Company, with executive offices in this city in the Pennsylvania Building. The late president of the company died at his home in Haverford, near Philadelphia, suddenly on New Year Day. He was in his 68th year at the time of his passing. He was the founder of the Cherry River Paper Company and its president, and head of the Cherry

River Broom and Lumber Company, with offices in Scranton, Pa., and in this city. The meeting for the purpose of electing a new president to succeed him will take place in Scranton within the next fortnight. The Cherry River Paper Company conducts its mills in Richwood, Va., and has a large acreage of timberland. The late president was prominently identified with the lumber interests in this State and with the late Clarence Collins, founded the Cherry River Paper Company more than a quarter century ago.

Lang Paper Co. Becomes New Jersey Corporation

For the purpose of providing for its conduct of business in New Jersey, the John Lang Paper Company, a pioneer Philadelphia roofing and felt manufacturing concern, has incorporated under the laws of that State with a change in the title of the company. The name of the concern has been changed to the Lang Paper Company, while the former Pennsylvania chartered firm, the John Lang Paper Company, has been dissolved. The Lang Paper Company recently purchased part of the plant of the Pusey and Jones Ship Yard in Gloucester, N. J., and after remodeling the plant to meet the needs of its roofing and felt manufacturing business will remove to the new home. The dismantling of the Philadelphia plant at 24th and Vine streets will begin on February 1, part of the mechanical units being installed at that time while the local mill will continue to operate part time in order to maintain production on current orders. The officers of the newly incorporated Jersey concern, the Lang Paper Company, are: President, E. H. Morris; vice president, J. A. LaFore, and treasurer, Frederick Geiger. These are the same officers controlling the former Pennsylvania corporation. The same board of directors governing the old concern has been re-elected to the New Jersey corporation. The election of officers for the new body took place last week. The property here was vacated under order of the municipality, through condemnation proceedings, for the purpose of incorporating the land in the recently opened Parkway running from City Hall to Fairmount Park, the Lang Mils being in direct line of the highway leading to the bank of the Schuylkill River flanking the Parkway.

Paper Trade Association Elects Officers

With the postponed meeting of the Philadelphia Paper Trade Association held in the current month instead of the customary November session, the annual election of officers resulted in the honor of the presidency of the organization going to Simon Walter, head of S. Walter, Inc., and a leader in public and civic life. While Mr. Walter has for many years been identified with the municipality on its councilmanic board he has also been active in promoting the interest and welfare of the paper industry in organization work and in 1926 served as the vice president of the local body. Other officers who were elected at the annual meeting last Friday were: Vice President, W. S. Wilcox, Wilcox, Walter Furlong Company; secretary, Norbert A. Considine, Paper House of Pennsylvania, and treasurer, A. Richard Hartung, A. Hartung, Inc.

The retiring president, David Lindsay, Jr., in presenting the new chief official of the organization at the meeting in the Chamber of Commerce, gave an account of the services he had rendered in behalf of the city and the industry. President Walter, responding to the applause of his fellows in the association, pledged his efforts towards the promotion of the membership welfare and to the extension of the enrollment. He thanked his associates for the honor conferred upon him, stating he could not continue the work of his predecessors without the cooperation of the members and expressed his appreciation of their coordination throughout the term of his office. The new president has been linked with the paper trade of the Quaker City for 30 years and for 16 years has been a member of the city council, occupying important offices on the various committees of the municipal body, and is chairman of its transportation committee. He is head of the two paper houses bearing his name, that at the North Fifth street address, and as head of the former Andrews Paper Company, of York, Pa., which he took over last year.

The retiring president gave an account of the year's achievements and then turned the meeting over to Secretary D. Lindsay Evans, who read a report of the activities for 1927. Other retiring officers are Vice President T. H. B. Smythe and Secretary Evans. The treasurer has been re-elected for the third consecutive time.

Upon the motion of the retiring president a unanimous approval was given to the proposed testimonial to be sent to the family of the late head of the Garrett-Buchanan Company, Col. John H. Sinex, whose demise occurred in late November. A committee was appointed to arrange for the testimonial with James McCracken, chairman, and Willard E. Seary and Joseph Miller included in its personnel.

Pennsylvania Salt Officials Honored

N. Emory Bartlett and Y. F. Hardcastle, recently elected vice presidents of the Pennsylvania Salt Manufacturing Company, have also been elected vice presidents of the Michigan Electrochemical Company and the Tacoma Electrochemical Company.

William D. LeBar has been appointed superintendent of the plant of the Pennsylvania Salt Manufacturing Company at Wyandotte, Mich., succeeding Y. F. Hardcastle in that position.

To Build Big Paper Mill Near Seattle

SEATTLE, Wash., January 20, 1928.—A large pulp and paper mill to cost $2,500,000 or $3,000,000 is to be constructed in Seattle soon, it was announced last week by Allan B. Engle, Seattle lumberman. Mr. Engle represents eastern and Portland capital. That preliminary plans for the mill were in progress was disclosed when Mr. Engle applied to R. K. Tiffany, supervisor of hydraulics, for permission to use sixteen cubic second feet of water from the Duwamish River.

Mr. Engle represents the Tom G. Taylor Company of Portland that operates pulp and paper plants in St. Helens, Ore., and Tumwater, Wash., and which will furnish some of the capital for the Seattle plant.

"Most of the financing, however, will be by Eastern capitalists," Mr. Engle said. "I cannot at this time disclose their identity nor their plans in detail. There are many obstacles to be overcome, the permit to use water from Duwamish River being one of them."

His company is not ready to announce the site of the mill, Mr. Engle said. However, it was reported that negotiations through John Davis & Co. were nearing completion for a twenty-acre tract in the Georgetown industrial district at East Marginal Way and East Waterway.

Mr. Engle said that he would be in a position to announce definite plans and the identity of the eastern capitalists within thirty days.

The easily accessible timber supply, ample water and the availability of electro-chemical supplies are major factors favoring the location of a pulp and paper mill in Seattle, Mr. Engle said.

A plant of the size contemplated would have a capacity of 100 tons of pulp and an equal amount of paper daily. Not less than 250 employees would be required to operate a mill of this size. The exact location of the mill will not be announced at this time. Installation of a pipeline and water pumping system will cost in the neighborhood of $50,000, according to Mr. Engle's application.

Mr. Engle is also vice president of the Silver Falls Lumber Company, near Merton, and secretary-treasurer of the Big Fir Lumber Company at Darrington, Wash. H. L. McCormick of the Charles R. McCormick Lumber Company, is chairman of the board of the Taylor Company and W. P. Hawley is president.

Fox Paper Co. Installs Globe Rotary

AKRON, Ohio, January 23, 1928.—The Biggs Boiler Works Company is completing the erection of an 18 foot diameter Globe Rotary Bleaching Boiler for the Fox Paper Company at Lockland, Ohio, this making the second machine of this size that Biggs has installed for the Fox Paper Company within the last year and a half.

Great Lakes News Print Mill Nears Completion

Organization Anticipates First Paper Machine at New Fort William Plant Will Be Ready for Operation About June 1 With Output of 160 Tons Daily—Second Paper Machine With Daily Capacity of 200 Tons to Commence Operations About January 1, 1929

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., January 23, 1928.—Construction activities at the plant of the Great Lakes Paper and Pulp Company, Ltd., at Fort William, Ont., have renewed with the advent of the New Year a progressive program that promises steadily increased employment to the workmen. The company is going ahead with a definite objective and expects to have the paper plant in operation by June 1 with a news print production of 160 tons daily, it is stated. It is planned to have the second paper machine of 200 tons daily capacity in operation by January 1, 1929. This second paper unit will have a 304-inch width, or 23 1/3 feet roll, which means that it will be the largest machine of its kind ever constructed in the paper making industry, it is learned.

Further paper machines are to be added as rapidly as they can be accommodated and installed, until eventually the plant of the Great Lakes Paper and Pulp Company, Ltd., will have a total estimated production capacity of 1,000 tons of news print daily. With pulp and paper limits fully completed, and their auxiliaries, including the timber cutting department, in full operation, it is expected the company will have 2,000 men on its Fort William payroll and to accommodate manufacturing operations a total of 125,000 cords of pulp wood will be consumed annually. The company's mill has been in operation since June, 1924, with a daily capacity of 160 tons of ground wood. Immediate steps toward extension, indicated by activities, include the installation of five more lines of grinders to afford a ground wood capacity of 200 tons daily. This department, including the 160-ton grinders, already in position, is expected to be ready to co-ordinate with the operations of the second paper machine to be installed January 1 next.

A new sulphite mill with a capacity of around 90 tons of sulphite daily, is also expected to be in operation a year hence, to synchronize with the 400-ton daily capacity paper producing machines. Other units to be developed that year include loading docks, adequate for paper and pulp shipping by both rail and water; coal docks; in-take facilities for lime-rock, sulphur and other materials used in the paper process; boiler room, finishing halls and minor constructions.

At the present time there are approximately 400 employees on the company's local payrolls, principally on construction. When the first paper machine is placed in operation in June, it is anticipated that about 300 men will be engaged in the mills and 400 on construction, the number gradually increasing as contemplated production facilities are extended to the world's greatest news print plant.

The giant paper machines now contracted for are being supplied and installed by the Bagley and Sewell Paper Machinery Company, of Watertown, N. Y.

Dryden Paper Co. Affairs

The shares of the Dryden Paper Company, Dryden, Ont., in selling at their present level, reflect more the current earning power of the company rather than its actual financial position, for since 1923 the company has been in arrears with the interest charges on its six per cent mortgage debenture stock, of which there is some $1,100,000 outstanding. In view of the situation surrounding the shares it is perhaps rather surprising that the stock should sell at a level equal to its issued price seven years ago. The present financial position of the company would hardly allow it to pay off the arrears of interest in cash. It is thought that ultimately a deal will be made with the debenture-holders to liquidate their interest arrears by the issue of common stock. Just how soon some organization of the company along these lines will take place and when it will pass out of the hands of the receivers, seems to be some distance off. Present levels of the stock certainly seem to discount very largely the future possibilities of the property. In any consideration of Dryden, it is, of course, to be remembered that the current earning power position of the company is satisfactory. Nevertheless before Dryden can pass out of the hands of the receiver, it must either meet its interest arrears or arrive at some compromise with the debenture-holders whereby they will take common stock in lieu of their four years of interest arrears.

Howard Smith's Good Showing

If the Howard Smith Paper Mills for the fiscal year just concluded makes deductions from its income account for depreciation and other charges in line with those of last year, it is understood that the earnings on the common during 1927 will amount to $9 a share. This figure of earnings on the common stock has not been exceeded during the past five years. In 1926, $7.62 was earned on the stock. Earnings of the company at the present time are said to be ahead of the same period a year ago. The Dominion Engineering Co. is engaged in building a fine new paper machine for the Howard Smith Paper Mills' Cornwall, Ont., plant, which will be delivered shortly. In the year just concluded, the company benefitted by bringing in its subsidiary, Canadian Cellulose, into production, but the benefits received last year were confined solely to obtaining soda pulp at satisfactory figures. During the current year it is possible that the parent company will be able also to take some profits from its subsidiaries' operations.

New Dominion Mill Construction Progresses

The main building of the new mill of the Dominion Envelope and Cartons, Ltd., is all completed and the bed plates of the paper machine are being erected, with beaters, jordans, motors, etc. A great deal of the work on the engine room and the boiler room has been done and these two buildings will be ready in three or four weeks. The buildings look very handsome and stand out in plain view from the main highway in Toronto, viz. Fleet street.

Abitibi Loses Mill Manager

William Ellis, mill manager at the Smooth Rock Falls, Ont., plant of the Abitibi Fibre Company, has resigned his position. Mr. Ellis went to the mill at Smooth Rock Falls about four years ago before the Fibre Company took it over, and built it up until the mill was producing more than its rated capacity and the costs had been greatly reduced. When the Abitibi Fibre Compaany took over the plant Mr. Ellis was made manager and continued in his position until recently. H. C. Atkinson, who has been with the company for about ten years in different capacities, and latterly as superintendent under Mr. Ellis, succeeds the latter as manager.

Rossing Plant Added to Equipment

A rossing plant has been added to the equipment of the Detroit Sulphite Company, which for eight years has been in operation with yards at West Fort William, Ont., and offices in Port Arthur, where Walter Laubengayer is the representative. The company also has an electric loader, while the yards at West Fort William have a storage capacity of 35,000 cords of pulp wood, which is shipped to Detroit, there to be manufactured into high-class paper, tissues, crepes, etc. The wood is obtained from contractors and farmers to the amount of from 20,000 to 40,000 cords in the season, according to the demand. Fifty men are employed at the plant, both summer and winter, and a vessel is moored at the yards during the winter to be loaded for export the following spring. For wood and in wages the company pays out from $700,000 to $1,000,000 annually.

News and Jottings of the Trade

Warwick Bros. and Rutter, manufacturing stationers, Toronto, have just put out a new line of cerise colored boxes for "The Warwick Gift Worthwhile" line of stationery and other novelties. The company are extensive makers of papeteries and other boxes and the series now on display at their plant on King street constitutes a new color treatment for the Christmas trade of 1928.

At the annual meeting of the Toronto Typothetae in the Prince George Hotel this week, amendments to the by-laws were made whereby wholesale paper dealers may become members of the organization and participate in its services. A number of the Toronto paper jobbing firms have already signified their intention of signing up with the Typothetae.

It is stated that arrangements are already under way for the rebuilding of the Hastings Paper Mill near Belleville, which was recently destroyed by fire with a loss of $100,000. The company had been turning out straw and chip paper for corrugating purposes, chip board, pulp wood sheets and rolls and carpet linings to the extent of ten tons a day.

The Dominion Envelope and Cartons, Ltd., Duchess street, Toronto, have formed a subsidiary company for which a charter has been secured under the name of Dominion Boxboards, Ltd. The charter authorizes the company to manufacture and deal in paper, paper materials and paper substitutes of all kinds, box board, card board and other preparations, products and manufactures of paper or pulp, and to manufacture paper boxes and cartons of all kinds.

G. W. Hendershot Corrugated Paper Company, Hamilton, Ont., recently removed to 15 Wellington street, north.

The Canadian Paper Box Manufacturers' Association, which had arranged to hold its annual convention at Niagara Falls, Ont., June 25 and 26, have been compelled to bring forward the dates to June 18-19, when the gathering will take place at the Clifton Hotel at the Falls.

The Fraser Companies' Expansions

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., January 23, 1928.—Official announcement has been made by Archibald Fraser, president of Fraser Companies, Ltd., of Edmundston, N. B., of the firm's intention to erect a mechanical pulp mill at Edmundston during the present year, and he further stated that paper board will be manufactured in the Edmundston plant before the close of 1928. The plans involve expenditure of $2,000,000, and the power for the new industries will be supplied from the development of Grand Falls, on the St. John River. An enlargement of the present sulphite pulp plant at Edmundston is already under way.

The new mechanical pulp mill at Edmundston will have a capacity of 150 tons and the paper board mill a capacity of 60 tons daily. The present capacity of the sulphite pulp mill at Edmundston is 160 tons daily and the addition now under way will increase the capacity to 260 tons daily.

At the present time the Fraser Companies are also extending the capacity of the Madawaska sulphite paper mill in Madawaska, Maine, across the St. John River from Edmundston, to 380 tons daily.

The New Brunswick Bureau of Information states that further official announcements are expected in the near future respecting the establishment of other pulp and paper mills on the Restigouche and Miramichi rivers in New Brunswick.

Compromise in Swedish Pulp Industry

WASHINGTON, D. C., January 25, 1928.—A radiogram to the Department of Commerce from Commercial Attache T. O. Klath, at Stockholm, states that a compromise between pulp mill officials and their workers has been reached through the efforts of the mediation commission. At the same time the sympathetic lockout which had been announced by the sawmill association, has been postponed until January 30, looking to a permanent settlement of the conflict in the pulp industry.

Paraffine Companies To Retire $615,000

[FROM OUR REGULAR CORRESPONDENT]

LOS ANGELES, Cal., January 12, 1928.—Announcement was made in Los Angeles this month that the Paraffine Companies, Inc., is preparing to retire the entire issue of $615,000 first mortgage series "B" gold sixes, due 1942. This issue constitutes the funded debt of the corporation. The capital structure consists of an authorized $6,000,000 in 7 per cent cumulative preferred, none outstanding, and an authorized 700,000 shares of no par value common of which there are 448,458 outstanding.

Since its birth in 1917, through merger of half a dozen companies, Paraffine purchased the Sunset Paper Mills of Los Angeles and control of the Schumacher Wall Board Corporation.

Besides Los Angeles operations, plants are located at San Francisco, Oakland, Emeryville, Antioch and Vernon in California, Tacoma and Seattle in Washington.

National Paper Products Company, subsidiary of the Zellerbach Corporation, recently reached an agreement with the Paraffine Companies, Inc., to merge their competing paper board departments into a new Deleware Corporation. It is understood that approximately 20 per cent of the business of Zellerbach and 35 per cent of Paraffine's will be involved. The new organization is the Fibreboard Products, Inc.

Earnings for the last fiscal year, ending June 30, 1927, were equivalent to $4.90 per share on the common. Total current assets of $7,091,570 were at the seven to one ratio to current liabilities. There was $6,052,890 net working capital and book value of the common stock was about $31 per share.

During the week a contract was signed for the erection of a new factory building for the Schumacher Wall Board Company at Slauson avenue and San Pedro street, Los Angeles. Work of demolishing several smaller buildings and digging foundation is adready well under way. The proposed structure, which will be used exclusively for the manufacture of wall board, will be 550 feet in length and 50 feet in width. Length of the building was necessitated in order to employ the straight-line conveyor system of production such as is used in many large automobile plants.

Reforestation Bond Issue Hearing

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., January 23, 1928.—The Northern New York paper manufacturing interests were well represented at the hearing on the reforestation bond issue proposal and bill to create an investigating committee, held at the State Capital last Wednesday. Among the many in attendance were George Sisson, of the Racquette River Paper Company, Potsdam; George J. Lawyer and Robert J. Buck, of the New York Development Association.

During the talk before the committee Mr. Lawyer called attention to the reforestation program of planting a billion trees a year adopted by the New York Development Association. In closing his talk he said: "The need of a reforestation policy has been felt no place in the State more than in northern New York, which is noted for its paper and pulp industry. The need of timber has been felt for many years. Because there has been no real policy of the State many of the paper mills have left the northern section and three-quarters of the timber supply is now coming from Canadian forests."

Mr. Buck called attention to the fact that the Canadian timber supply is diminishing. "I lived in Montreal for three years," he said, "and I have visited the forests where timber supply for the northern New York paper mills is cut and I was more than surprised that a trip of 150 miles back from the plants was necessary to bring one to the forests."

Among the other speakers favoring the proposed State program were Dean Franklin Moon, of the State College of Forestry, Syracuse University; William G. Howard, superintendent of the State forests; Professor C. L. Hosmer, of the Department of Forestry, Cornell University, and numerous others. There was no opposition voiced to the reforestation program.

Nekoosa-Edwards Organization Doubles Stock

Par Value of Shares Increased to $6,000,000, Following Declaration of $3,000,000 Stock Dividend—Holdings of Each Stockholder to be Increased in Proportion—Officers Report Shows Satisfactory Business During the Past Year

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., January 23, 1928.—Capital stock of the Nekoosa-Edwards Paper Company, of Port Edwards, Wis., was doubled by action of the stockholders at the annual meeting held this week. A stock dividend of $3,000,000 was declared, with the result that the par value of the company's shares is increased to $6,000,000. Holdings of each stockholder therefore are increased in proportion.

Reports of the officers showed a satisfactory business during the past year. The former directors and officers were re-elected, the board consisting of the following: President and treasurer, L. M. Alexander; vice president and general manager, J. E. Alexander; vice president, J. G. Rosebush; secretary, C. A. Jasperson; directors, F. J. Wood, G. O. Babcock, G. W. Kibby, J. B. Nash and L. M. Hanks.

Wing Again Heads Nicolet Paper Co.

W. C. Wing, who is president of the Fox River Paper Company, Appleton, Wis., continues as president of the Nicolet Paper Company of DePere, Wis., as a result of the annual meeting. The corporation was formed early last year to take over the DePere plant of the American Writing Paper Company. Other officers chosen were: Vice president and general manager, H. C. Hanke; secretary, E. J. Dempsey, Oshkosh, Wis.; treasurer, H. K. Babcock, Appleton, Wis. Other members of the board of directors are: C. B. Clark, Neenah, Wis.; R. S. Powell, Appleton, Wis., and Mowry Smith, Menasha, Wis.

The company began operations this fall with two machines turning out heavy grease proof paper and glassine. Considerable remodeling took place before production could be started.

Arthur Redlin Atlas Mill Superintendent

Arthur Redlin has been appointed by the Kimberly-Clark Company, Neenah, Wis., as superintendent of the Atlas mill at Appleton., Wis. He formerly was superintendent of the company's Neenah mill. His successor at the latter mill is George Wingrove, former tower boss at the Atlas mill. Mr. Redlin was presented with a watch upon his departure from the Neenah mill by the men employed there, and with a smoking stand by the women workers.

Tomahawk Production Record

Employees of the Tomahawk Kraft Paper Company, Tomahawk, Wis., are after a world's record for production. They broke their record recently by producing 57 tons of kraft paper on one machine during three shifts. They intend to better this record also in the near future.

Neenah Mill Reconstruction

Repair work of considerable importance has been started at the Neenah Paper Company's mill at Neenah, Wis. The contract has been let to C. R. Meyer & Sons Company. All wooden floors in the old section of the plant are being replaced with concrete. Improvements also include the installation of several new foundation walls and supporting piers beneath the structure. All of this work will be attempted without interrupting operation of the mill.

Benefit Association's Good Record

Benefits amounting to nearly $70,000 have been paid to employees of the Nekoosa-Edwards Paper Company, Port Edwards, by the employees Mutual Benefit Association during its seven years of existence, according to a report presented at the annual banquet of the organization this week. The association has a surplus of more than $31,000 at the present time.

Officers were re-elected. They are: President, A. P. Mulroy; vice president, F. R. Goddard; secretary, Mrs. Josephine Olson. Among the speakers at the banquet were L. M. Alexander, F. H. Rosebush, C. A. Jasperson, G. W. Kibby, L. M. Hanks and J. B. Nash.

Green Bay Paper Worker Killed

One of the first fatal accidents in years occurred this week at the Hoberg Paper and Fibre Company, Green Bay, Wis. Matt Hendricks, 22, employed on a paper machine in the fiber division, was crushed in the machine and was so bady injured that he died a short time afterward. He went into the pit to remove paper which had wound around the felt roll. His hand was caught between the felt and the roll, and his body was pulled part way in before the machine could be stopped. His left side was crushed.

Safety School's Opening Session

Eighty-seven paper mill employees attended the opening session of the second annual safety school at Green Bay, Wis. Mills represented were the Northern Paper Mills with 38 men, the Hoberg Paper Mills, with 34 men, and the Fort Howard Paper Company, with 15 men. The addresss was made by A. S. McArthur, educational director of the Kimberly-Clark Company, Neenah, Wis. His subject was "The Foreman's Place in Accident Prevention." A similar school at Appleton, Wis., also enjoys a large enrollment.

News of the Trade

About 150 employees of paper mills at Wausau, Brokaw, Rothschild and Mosinee, Wis., have enrolled in the classes in pulp and paper making which are being held for the first time at Wausau. This is the twenty-fourth class formed in Wisconsin this year and is considered one of the largest. Instruction is in charge of H. G. Noyes, formerly of the Oxford Paper Company, Rumford, Me. Organization work was conducted largely by Allen Abrams, of the Marathon Paper Mills Company.

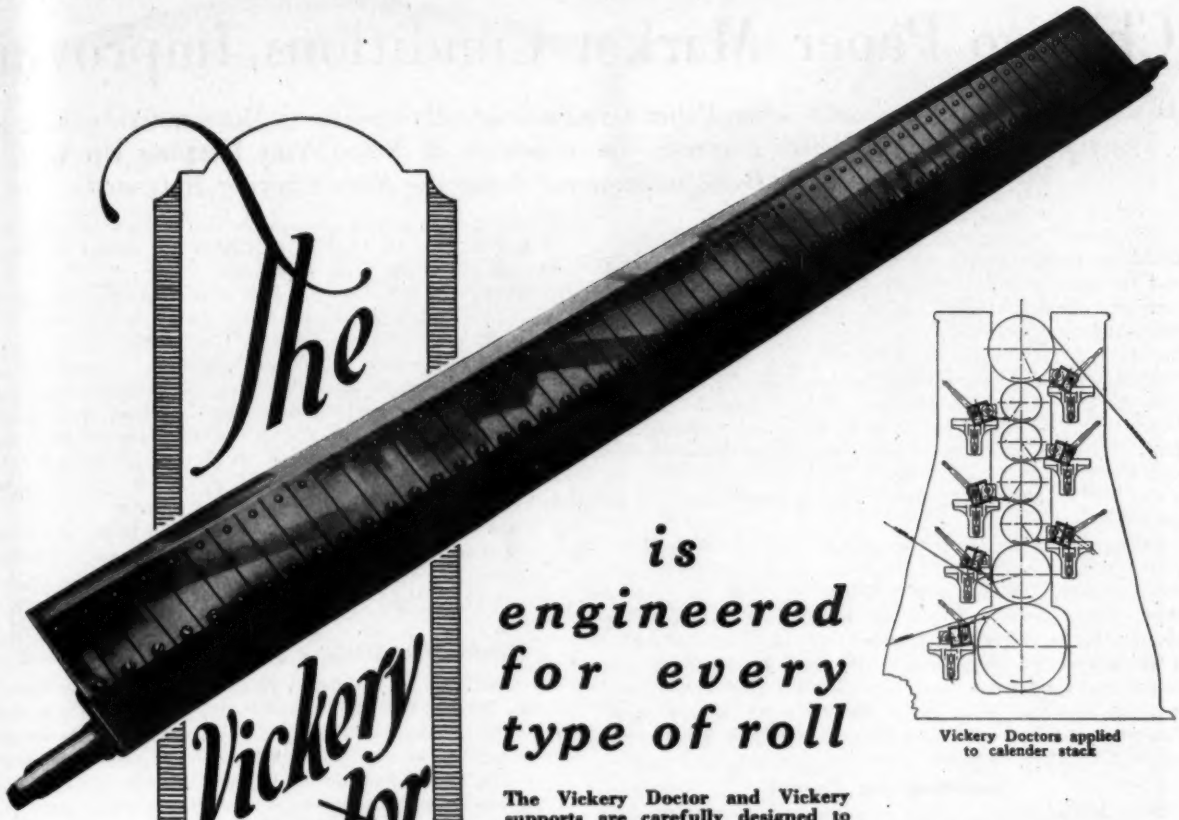
Several paper mills in the Fox River Valley were represented in the first aid classes which have been conducted at the Vocational school at Appleton, Wis., this winter. The course has been completed and certificates given those who passed satisfactory tests. The men were taught to use first aid kits, and to act in cases of dislocations, common injuries, fractures, restoration of breathing, stoppage of bleeding, unconsciousnesss, and transportation of the injured.

After operating for 284 consecutive days without a lost time accident, the Niagara, Wis., mill of the Kimberly-Clark Company had its record interrupted by injuries to George Phillips, head repairman in the power department. He suffered first degree burns on the chest and shoulders because of escaping steam on an economizer. He was tightening a cap, and the steam was released when a bolt broke. The mill had not had a lost time accident among its 600 employees since February 16, 1927, and was hoping to round out a year. The nearest competitor in the safety contests was the Kimberly-Clark mill at Niagara Falls, N. Y. This mill had 209 perfect days to its credit.

Ground Wood Prices Advance in Norway

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., January 25, 1928.—Ground wood prices advanced during the past few weeks in Norway and exporters are now looking forward to receiving more remunerative prices, according to a report from the American Consul at Oslo. The cooperation between Scandinavian and Finnish wood pulp mills is reported to be developing satisfactorily.



The Vickery Doctor

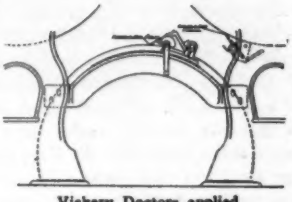
is engineered for every type of roll

The Vickery Doctor and Vickery supports are carefully designed to meet the special requirements of every type of roll. The result is a continuously clean roll without scoring or adjustment.

Ask us to send you blue prints showing the application of the Vickery Doctor to your

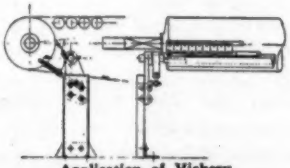
Wire rolls
Press rolls
Breast rolls
Dryers
Yankee or M. G. dryers
Calenders
Super calenders
Sizing rolls
Cleaning rolls
Cooling rolls
Jacket couch rolls.

Vickery Doctors applied to calender stack

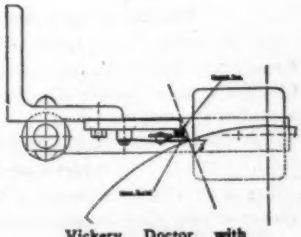


Vickery Doctors applied to top and bottom dryers

Assembly of Vickery patent press roll doctor



Application of Vickery Doctor to a breast roll



Vickery Doctor with wooden blade applied to jacket couch roll

BIRD MACHINE COMPANY
South Walpole
Massachusetts

BIRD MACHINERY

1592

Chicago Paper Market Conditions Improving

Demand for Both Fine and Coarse Paper Grades Gradually Becoming More Active—Book and Cover Papers Also in Better Request—Consumption of News Print Keeping Up With Production—Sulphite Bond in Stronger Position—Active Spring Indicated

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., January 23, 1928.—A cold wave has injected an additional amount of pep into all business transactions generally and the paper houses of this city are feeling the effects of this increased stimulus. Business in the fine paper market has taken a more optimistic tone while the coarse grades of paper are also improving their condition somewhat over what it was prior to the Christmas season. Indications of increased activity evidenced before the first of the year have proved sound and, in general, a better spring is expected than that of last year. Book and cover papers are in better demand, while printing papers as a whole are coming along in very good shape. News print continues to hold a fair position and the demand is keeping along fairly well with production.

Sulphite bond is getting stronger according to this week's reports. Wrapping papers and tissues are varying with the general run of business which is fair. The city of Chicago is trying the experiment of keeping all cars parked out of the loop district and allowing trucks only a few minutes to unload. This parking rule is said by many of the retailers in the city to be affecting business causing more than the usual January lull. However, a longer space of time will be given to thoroughly try the system out. Paper men supplying merchandise to the large loop firms are also watching the experiment with a great deal of interest.

Tattershalls Inc. Formed

Three well known paper men, formerly with the Fort Dearborn Paper Company of Chicago, have recently formed an organization of their own known as Tattershalls, Inc., at 515 South Wells street. J. S. Tattershall is president, E. E. Reimer, treasurer, and T. O. Umbright, secretary. Mr. Tattershall has had fifteen years of experience in the paper game and Mr. Umbright has been active in that line for over eight years. The three officers of the new paper house were with the Fort Dearborn Paper Company an average length of five years. Tattershalls, Inc., will deal in seconds and job lots, handling coated papers for the most part. Mr. Umbright informed the PAPER TRADE JOURNAL representative that since December 1, when the organization was formed, business had been very good and that the first month of operation had been very satisfactory.

Wrapping Paper Service Bureau Luncheon

The Wrapping Paper Service Bureau, American Pulp and Paper Association, held a luncheon and meeting at the Congress Hotel, Chicago, at noon January 26. A very good attendance was on hand according to reports. A. J. Stewardson, secretary of the bureau, was in Chicago for the luncheon and meeting.

News of the Trade

The S. D. Warren Company, Boston, is offering the second of a series of educational books to the trade, the first book of which was entitled "Selling With the Help of Direct Advertising—in conjunction with Newspapers, Magazines and Other Mediums." The second book is entitled "Selling With the Help of Direct Advertising—How Printed Pieces are being used to meet definite selling problems."

The Middle States Paper Mills, Inc., is making rapid steps toward complete organization with the expectations of starting production in little more than a month. The firm will make "Adwrap," a well known advertising wrapper. Edgar L. Hamilton is president of the new organization.

C. K. Higgins, Chicago and Western representative of the Sisalkraft Company, is in California on an extended business trip. He is not expected back in Chicago for nearly two months according to reports from his office. Mr. Higgins is a former secretary of the National Paper Trade Association.

A number of out of town visitors were reported in Chicago during the past week. Among this number were the following: J. B. Jones, Western Newspaper Union, Omaha, Nebraska; Sidney J. Burgoyne, of Sidney J. Burgoyne and Sons, Philadelphia, Pa.; Clarence Buskirt, of the cutting division of the Michigan Paper Company at Kalamazoo, Michigan, and T. D. Earl of the mill division at Plainville, Michigan; Mr. Sutpen of the Beveridge Paper Company, Indianapolis, Indiana; D. T. Quirk, Peninsula Paper Company, Ipsilanti, Michigan, and J. H. Conner of the Tomahawk Pulp and Paper Company, Tomahawk, Wisconsin.

A number of Chicago paper merchants will be in the east next month attending the meetings of the association while mill representatives will also return east for the banquet and business meeting of the Salesmen's Association of the Paper Industry.

Good Will Gathering at Finch Pruyn Plant

GLENS FALLS, N. Y., January 23, 1928.—The recreation rooms of Finch, Pruyn & Company were the scene this week of a good-will gathering in which both employees and officials of the company participated. The meeting was held under the auspices of Hudson River Local, Pulp, Sulphite and Paper Mill Workers' Union, which is composed largely of employees of the Finch, Pruyn plant.

Addresses were given by H. W. Sullivan, vice president of the Pulp, Sulphite and Paper Mill Workers' Union, and William R. Smith, president of the International Brotherhood of Papermakers. Both men stressed the fine working conditions that exist in the Finch, Pruyn plant and pointed to the splendid cooperation between the employees and the management.

George K. Walker, general manager of the Finch, Pruyn mill, gave a brief address in which he said that the great change for the better in industry is the result of picking the right men for foremen.

Samuel Pruyn, employment manager, on behalf of officials of the company, extended best wishes to the employees, inviting them to use the recreation rooms for similar meetings at any time. Mr. Pruyn stated that Maurice Hoopes and Louis F. Hyde were out of town but were glad that the meeting was to be held, foreseeing a better understanding between the union and the management. Other officials addressing the meeting were George E. Fuller, superintendent of the pulp mill, and H. F. Bullard, assistant to Mr. Hyde.

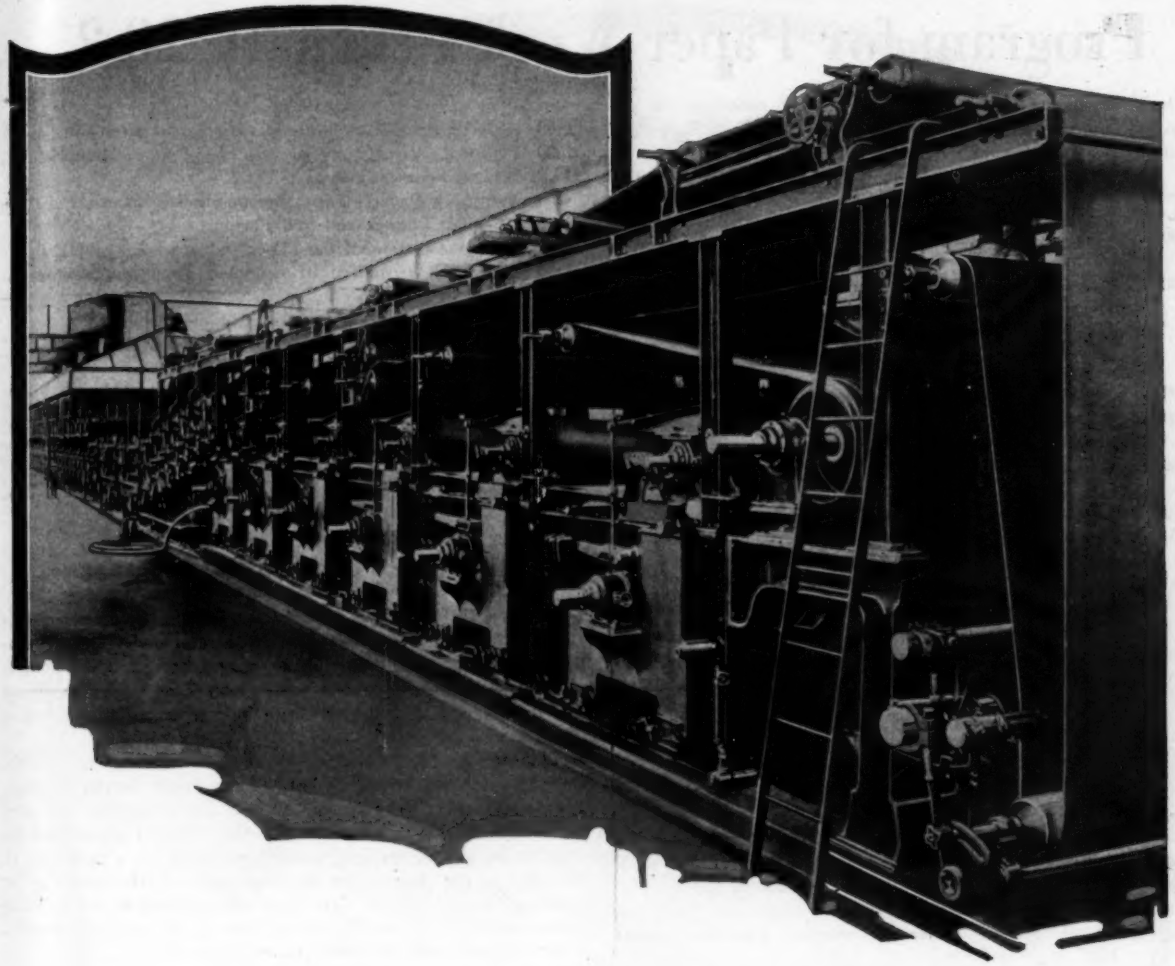
Sacramento Pulp & Paper Co. Formed

SAN FRANCISCO, Cal., January 20, 1928.—Formation of the Sacramento Pulp and Paper Company, Inc., came to light last week when the sale of $1,000,000 of stock was authorized by the State Corporation Department.

The company, engaged in the manufacture of pulp and paper from grape vine cuttings, is headed by H. D. Wagnon, president. B. F. McLeod is secretary. In addition to the officers the board of directors consists of C. B. Bills, J. C. Smith, V. Panatonni and E. M. Conley.

Capital consists of $50,000 of preferred stock of $10 par value and $50,000 common, both of $10 par value.

Permission was given to sell one share of preferred to each incorporator, 49,995 shares of preferred to the public and 50,000 to Wagnon for contracts and services.



An Unnecessary Advantage

The source of greater profits today lies in finding new production economies or increasing the market for your product.

If the equipment in your mill is not operating at highest efficiency, if you are handicapped by antiquated machinery or if you cannot supply the widths in demand, you are, in reality,—conceding your competitors an unnecessary advantage.

The illustration shows the Vat End of a six cylinder, 112 inch trim Board Machine which was recently installed at the Clifton Paper Mill, Clifton, N. J. This high speed cylinder machine replaced an old 80 inch machine.

Put your machine on a profit paying basis. Don't delay,—investigate Downingtown Machines (Fourdrinier and Cylinder) and let us bid on your requirements.

Our Products Meet Our Promises

DOWNINGTOWN Board Machine

Downingtown Mfg Co. Downingtown Pa.

Program for Paper Week February 20-23

The following is the tentative schedules of meetings for the fifty-first annual convention of the American Paper and Pulp Association at the Waldorf-Astoria Hotel February 20-23:—

Monday, February 20, 1928

AFTERNOON

2:30 Southern Kraft Manufacturers Association—Room 112.

EVENING

7:00 Salesmen's Association of the Paper Industry. Annual Dinner—Waldorf Roof Garden.

Tuesday, February 21, 1928

FORENOON

10:00 Tissue Paper Manufacturers Association—Room 110.
10:30 American Paper and Pulp Association. Annual Meeting—Astor Gallery.
10:30 Bristol Board Manufacturers—Room 114.

AFTERNOON

1:00 President's Luncheon—Room 115.
2:30 American Paper and Pulp Association. Annual Meeting—Myrtle Room.
2:30 Cover Paper Manufacturers Association—Room 110.
2:30 Sheet and Kraft Tissue Divisions, Tissue Paper Manufacturers Association—Room 112.
2:30 Napkin and Toilet Paper Divisions, Tissue Paper Manufacturers Association—Room 109.

Wednesday, February 22, 1928

FORENOON

9:30 Technical Association—Myrtle Room.
9:30 Cost Association of the Paper Industry—Room 115.
10:00 Tag Board Manufacturers—Room 106.
10:00 Writing Paper Manufacturers Association—East Room.
10:30 American Waxed Paper Association—Room 141.
10:30 Cardboard Manufacturers Association—Room 109.

AFTERNOON

1:00 American Waxed Paper Association, Luncheon—Room 142.
1:00 Binders Board Manufacturers Association, Luncheon—Room 114.
1:00 Glazed and Fancy Paper Manufacturers Association, Luncheon—Canadian Club, Hotel Belmont.
1:00 Paper Makers Advertising Club, Luncheon—Room 112.
1:00 Cost Association of the Paper Industry, Luncheon—Room 115.
2:30 Southern Kraft Manufacturers Association—Room. 109.
2:30 Fine Paper Division—Writing Paper Manufacturers Association—Room 110.
2:30 Sulphite Bond Division—Writing Paper Manufacturers Association—East Room.
2:30 Technical Association—Myrtle, 106, 151.
4:00 Cloth Tape Division—National Association of Gummed Tape Manufacturers—Commodore Hotel.

EVENING

7:00 Technical Association, Dinner—Commodore Hotel.

Thursday, February 23, 1928

FORENOON

9:30 Technical Association—Myrtle, 106, 110.
9:30 Cost Association of the Paper Industry—Room 112.
10:00 National Association of Gummed Tape Manufacturers—Room 141.
10:30 American Waxed Paper Association—Room 109.
10:30 Salesmen's Association of the Paper Industry—East Room.
10:30 Converting Paper Mills Association—Room 114.
10:30 Wrapping Paper Manufacturers Service Bureau—Tea Lounge and Sun Parlor.
10:30 Woodlands Section, A. P. & P. A. —Room 115.

AFTERNOON

1:00 American Waxed Paper Association, Luncheon—Room 100.
1:00 National Association of Gummed Tape Manufacturers Luncheon—Room 142.
1:30 Wrapping Paper Manufacturers Service Bureau, Luncheon—Tea Lounge and Sun Parlor.
2:00 Cost Association of the Paper Industry—Room 112.
2:30 National Association of Gummed Tape Manufacturers—Room 141.
2:30 American Waxed Paper Association—Room 109.
2:30 U. S. Pulp Producers Association—Room 114.
2:30 Technical Association—Myrtle Room.
2:30 Woodlands Section—A. P. & P. A.—Room 115.

EVENING

7:00 American Paper and Pulp Association, Reception—Astor Gallery.
7:30 American Paper and Pulp Association, 51st Annual Banquet—Grand Ball Room.

Important Freight Rate Case Hearing

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., January 23, 1928.—A hearing before the Public Service Commission relative to freight rate cases having to do with the shipment of salt to and from points within the State is scheduled to be held in this city February 7, according to notices sent to a number of northern New York paper mills interested in the case.

New rates on salt shipments were ordered published by both the Interstate Commerce Commission and the Public Service Commission to take effect last October. On the day before the new rates were to take effect the New York Central Railroad presented a petition to the Public Service Commission asking for a reopening of the cases on the ground that the basic scale of rates given by the Commission for northern New York was a precedent which would automatically be followed by lower rates on all other commodities if the proposed salt rate were allowed to stand.

On the same ground a petition to become interveners was filed on November 1 and included as signers, the following pulp and paper companies: St. Regis Paper Company, Taggart-Oswego Paper and Board Corporation, Racquette River Paper Company, Harmon Paper Company, West End Paper Company, Gould Paper Company, Sherman Paper Company, Taggart Brothers Company, Harrisville Paper Corporation, Champion Paper Corporation, National Paper Products Company, Warren Parchment Company, Brownville Board Company, Knowlton Brothers, Inc., Degrasse Paper Company, Bagley & Sewall Company.

The case is considered one of the most important freight rate cases affecting northern New York that has ever been tried. The intervening pulp and paper companies will be represented at the hearing by the law firm of Clark & Laroe, of Washington, D. C., and Joseph A. Quinlan, traffic manager of the St. Regis Paper Company, and affiliated companies.

Goes With Beecher Peck & Lewis

DETROIT, Mich., January 23, 1928.—Beecher Peck & Lewis have recently sent out an announcement to the trade in Detroit and vicinity of the appointment of Roy H. Nitterauer who is to assume charge of the Announcement Department of these paper merchants.

Mr. Nitterauer comes to Beecher Peck & Lewis with many years of experience in the handling of announcement papers. He was formerly associated with the Alling & Cory Company of Buffalo, as well as the R. M. Meyers Company of the same city.

He is well known among the converters as well as the mills making the papers for announcement uses.

WALDRON Paper Rolls

Cost Less to Use Because They Stand Up Longer In Service

Made of Only The Best Paper To Insure Long Life and Lasting Quality.
Paper Carefully Conditioned To Insure Proper Moisture Content.
Shafts and Heads Exactly Proportioned To Withstand The Tremendous Pressure Used In Compressing Waldron Rolls.
Held Under Pressure Proper Length Of Time To Thoroughly Meet Our Exacting Tests for Hardness and Head Balances.

Write for your copy of this instruction sheet

A Copy Will Be Gladly Sent To You On Request!

How a Paper Roll Should be Run In!

JOHN WALDRON CORPORATION

MAIN OFFICE AND WORKS, NEW BRUNSWICK, N. J

208 W. Washington St.
CHICAGO

30 East 42nd Street
NEW YORK

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Monroe, Mich.—The Monroe Paper Products Company is reported planning the construction of a new addition to its plant at West street and Elm avenue, to be one-story, reported to cost in excess of $40,000, including equipment. W. R. Harris is president.

St. Paul, Minn.—The Minnesota Mining and Manufacturing Company, 585 Goodrich avenue, manufacturer of sandpaper and other abrasive papers, has completed plans for the rebuilding of the portion of its place recently destroyed by fire with loss reported in excess of $150,000, including equipment. It will be two-story and basement, brick, 152x575 feet, reported to cost more than $200,000, with proposed new machinery and equipment installation. A general building contract has been let to Struchen & Romer Company, Shubert Building, St. Paul. Toltz, King & Day, Inc., Builders' Exchange, is architect and engineer. E. B. Ober is president.

Towanda, Pa.—The Towanda Folding Box Company, Towanda, recently formed with a capital of $10,000, is planning the operation of a local plant for the manufacture of paper boxes and containers. It is understood that work will begin at an early date. The company is headed by Curtis C. Van Horn and William P. Wilson, both of Towanda; and John W. Conklin, Wysox, Pa. The last noted will be treasurer and representative.

Canton, N. C.—The Champion Fibre Company, Hamilton, Ohio, has arranged a fund of about $200,000, for extensions and improvements in its local mill during 1928, and will proceed with work at an early date. Plans have been approved for the early erection of a new boiler house at the mill, designed to use pulverized fuel. The station will have a capacity for generating 300,000 pounds of steam per hour at a 450-pound working pressure. Contracts for a considerable portion of the equipment have been let, and other apparatus will be purchased at an early date. Following the completion of the unit, it is purposed to install a second addition of like size and type. The installation will include a 4,000 kw. Westinghouse generator with accessories.

Fresno, Cal.—The Zellerbach Paper Company, 534 Battery street, San Francisco, Cal., has engaged Felchen, Shaw & Franklin, Patterson Building, Fresno, architects, to prepare plans for its proposed new local factory branch and distributing plant at H and Kern street, to replace a structure destroyed by fire several weeks ago. It will be three-story, 50x150 feet, estimated to cost approximately $50,000, with equipment. It is understood that bids will be asked on general contract at an early date.

Albany, N. Y.—The Albany Corrugated Container Corporation, care of Thomas I. Van Antwerk, 60 State street, Albany, recently organized by Mr. Van Antwerk and associates with capital of 1,000 shares of stock, no par value, is said to be arranging for the early operation of a local factory for the production of corrugated paper boxes, strawboard containers, and other paper packages. Joseph A. Seery, 71 Walter street, Albany, is also interested in the new organization.

New York, N. Y.—The Cross Paper Products Company, Inc., Bronx, has concluded negotiations for the purchase of a building at 143rd street and Third avenue, totaling about 65,000 square feet of floor space, heretofore used for retail service, and will remodel and improve for a new factory. Plans will be prepared at once, and arrangements made for equipment installation. It is understood that the company will remove an existing works to the new location.

Cleveland, Ohio.—The J. B. Pearce Company, 1069 Old Superior Viaduct, wholesale wall paper, is reported planning for the rebuilding of the portion of its warehouse at location noted, destroyed by fire January 17, with gross loss reported in excess of $200,000. The company had recently completed the stocking of a large allotment of wall paper for spring business, aggregating close to 1,000,000 rolls, all of which were lost in the fire.

East Walpole, Mass.—Bird & Sons, Inc., manufacturer of paper goods, paper roofing, etc., has begun foundations for a proposed new addition to its plant, for which general contract recently was let. It will be one-story, reported to cost in excess of $18,000, including improvements in adjoining structure.

Philadelphia, Pa.—The Art Paper Novelty Company has been incorporated by Louis C. Bouchard, 3079 Tulip street, Philadelphia, and associates with capital of $25,000, to operate a local factory for the manufacture of decorative paper novelties and other paper goods. It is proposed to begin work at an early date. Mr. Bouchard will be treasurer of the new company; Albert Singman and David Simon, 4557 North Thirteenth street, Philadelphia, are also interested in the organization.

Newark, N. J.—Wesley & Winter, Mechanic and Lawrence streets, manufacturers of paper goods for commercial and other service, converters of paper, etc., have leased an adjoining three-story structure at 84-8 Mechanic street, and will use for expansion. The company will remodel and improve the building and will install facilities at an early date.

South Bend, Ind.—Plans have been filed by the Empire Box Works, 518 West Monroe street, Chicago, manufacturer of paper boxes and containers, for its proposed new local plant on West Sample street, and it is understood that superstructure will proceed at an early date. The initial unit will be one-story and basement, 225x275 feet, brick, reported to cost close to $100,000, with equipment. A list of machinery to be installed will be arranged in the near future. W. M. Ellwood, Christman Building, South Bend, is architect.

Harrisburg, Pa.—The Harrisburg Paper Box Company, 1550-2 Vernon street, is operating on a full capacity schedule for the manufacture of paper boxes for the packing of hosiery, confectionery and similar products, and proposes to continue on the present basis for an indefinite period. During 1928 it is expected to advance the plant output to exceed producing during the past year. W. J. McClintock, Jr., is general manager.

Belleville, Ont.—The Hastings Paper Mills, Ltd., is said to have preliminary plans under advisement for the rebuilding of the portion of its mill in Thurlow Township, recently destroyed by fire with loss reported at close to $100,000, including equipment. The reconstruction will approximate a like sum.

Edmunston, N. B.—The Fraser Companies, Ltd., is reported to be planning the construction of a new local pulp mill with adjoining unit for the production of paperboard, to consist of

MORE HISTORY!

"Simple facts not foolish statements."

Dilts NEW TYPE Beaters on Kraft.

Chapter IX

"Figures never lie." Here is an unsolicited report from a mill where we had rebuilt one beater operating mostly on kraft stock. After this first installation we rebuilt five (5) more for them. We have rebuilt many beaters in many mills after they first tried out one and found for themselves the great saving and improvement they could obtain.

Read this report:

	Horse Power	Hours	H. P. Hours	H.P. Hours per lb. stock	Lbs. stock	Consistency
Old Beater 66"x54"	62.5	2.5	156.2	.1168	1339	6%
Rebuilt Beater 66"x54"	66.8	3.66	244.5	.0798	3064	6.8%

Summary: The rebuilt beater shows a saving of 31.7% in power per pound of stock, and an increase of 56% in stock handled per 24 hours. Mullen and Laboratory tests showed improvement in quality.

In these days of beater room efficiency you cannot afford to lag behind. You should let us show you what has been done in other mills and can be done in yours. "Your paper is made in your beaters."

Dilts

MACHINE WORKS, Inc. FULTON, N.Y.

EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

several buildings, reported to cost more than $1,500,000, including machinery. Power supply for the plant will be secured from the hydroelectric power development at Grand Falls on the St. John River. It is proposed to have the mill unit ready for service by the close of the present year.

St. Louis, Mo.—The St. Louis Paper Can and Tube Company has been chartered under state laws, by Edward G. Platt, Merchants Laclede Building, to operate a local plant, and is said to be arranging for early activities with development of extensive capacity in paper tubing, cans and other containers. W. P. Hicks, Webster Groves, Mo., is also interested in the new organization.

Donnacona, Que.—The Royal Securities Company, Montreal, has concluded negotiations for the purchase of a controlling interest in the Donnaconna Paper Company, Ltd., with local pulp and news print mills, for a reported consideration of about $14,000,000. The company will take possession at once, and is said to have plans under advisement for expansion in the near future.

New Companies, Etc.

Chicago, Ill.—The Allied Paper Stock Company, 5353 South Franklin street, has been organized with capital of $35,000, to deal in paper products of various kinds. The incorporators are John J. Meyers, Charles H. Weber, and William L. McKay.

New York, N. Y.—Paprus Jobbers, Inc., has been incorporated with capital of 100 shares of stock, no par value, to deal in paper boxes and other paper products. The incorporators are Eugene Salamon and Sidney L. Cahn, 15 East 42nd street, New York.

Wilmington, Del.—The Stone Paper Tube company has been incorporated under Delaware laws with capital of 100 shares of stock no par value, to manufacture special paper tubing and kindred products. The company will bge represented by D. J. Reinhardt, Citizens Bank Building, Wilmington.

Menasha, Wis.—For accounting purposes, the Menasha Printing & Carbon Company has filed notice of decrease in capital stock from $810,000 common and $150,000 preferred to a nominal amount of $10,000.

Chateaugay, N. Y.—The High Falls Pulp and Paper Company has filed notice of company dissolution, under state laws.

Norwich, Conn.—The Tidewater Paperboard Company has arranged for an increase in capital by an amount of $100,000 preferred stock, making a total outstanding capital stock of $400,000.

Chicago, Ill.—The Interstate Paper Corporation, 608 South Dearborn street, has been incorporated with a capital of $10,000, to manufacture and deal in paper goods. The incorporators are Benjamin H., and Irving Bachrach, and Charles Goodman.

New York, N. Y.—The Sevall Paper Corporation has been incorporated with capital of $10,000, to manufacture and deal in special paper products. The incorporators are Harry M. Edelstein and Nathan Frankel, 20 West 69th street, New York.

North Wales, Pa.—The Business Record Corporation has been incorporated with capital of $30,000, to manufacture and deal in loose leaf forms, and other paper products for commercial use. The incorporators are William M. Kirkpatrick, E. A. Kirkpatrick, and George E. Lukens, 214 School Street, North Wales. The last noted is representative.

Trenton, Mich.—The Story Manufacturing Company, Trenton, has filed notice of change of name to the Story Parchment Company.

Miami, Fla.—The Miami Stationery Company has been organized by local interests to manufacture and deal in writing papers and other stationery products. The incorporators are C. M. Strange, Norman Johansen, and A. Skagseth, 1520 N. W. Second street, Miami. Last noted is representative.

Indianapolis, Ind.—The General Fibre Products Company has filed notice of reduction of preferred stock of the company from $1,000,000, to $750,000.

Detroit, Mich.—The Detroit Wax Paper Company has recently arranged for an increase in capital from $100,000 to $500,000, for general expansion.

Park Falls, Wis.—The Flambeau Paper Company has filed notice of change in capital stock to an amount of $2,050,000. The company has recently arranged for a new addition to its mill.

Jersey City, N. J.—The Van Box & Board Co., Inc., has been incorporated with a capital of $300,000, to manufacture cardboard and other boxes and containers. The company is represented by Raymond Vanlderstine, 590 Montgomary street, Jersey City.

Holyoke, Mass.—The National Blank Book Company has been incorporated with a capital of $1,300,000, to take over and expand the local company of same name, manufacturer of blank books and other paper products. Edward S. Towne is president, and Frank B. Towne, treasurer.

Metropolitan Bag Jobbers To Meet

On March 8, 1928, at the Hotel St. George, Brooklyn, New York, the Metropolitan Bag and Paper Jobbers' Association, Inc., will hold its eleventh annual conference and banquet.

This promises to be one of the outstanding events of the year in the paper and paper bag industry in this district. Some of the most notable figures in the paper industry are scheduled to address the conference in the afternoon, and a man of national reputation will address the banquet in the evening.

The convention will open by a luncheon at the expense of the association, to which all of the jobbers and manufacturers in the Metropolitan area will be invited as guests of the association. Thereafter there will be an exhibit of the various products manufactured by the different manufacturing concerns in the paper industry, taking the form of a paper show.

Following the exhibition there will be an open conference, at which addresses by prominent men in the industry will be made on various subjects, followed by an open forum for both manufacturers and jobbers.

The final event will be a banquet in the evening, for which a gala program of entertainment has been arranged.

The association seeks the cooperation and support of all those connected with the paper industry in making this a great event. Arrangements are in charge of the entertainment committee, which is composed of the following: George W. Batz, chairman; Thomas J. Nagle, president of the association; Nelson Berger, of the Forbes Paper Company; Samuel Fishman, of Finkel Paper Company; Louis Silfen, of Benjamin Silfen, Inc.; Charles Norz; Jacob Saul Barshay, counsel for the association.

Contract Signed for Aberdeen Water

PORTLAND, Ore., January 20, 1928.—The West Lumber and Pulp Company has signed a contract with city officials of Aberdeen, Wash., for a maximum of 10,000,000 gallons of water daily, to be available by November 1. The contract is based on the regular schedule adopted by the council. A proviso permits the company to purchase an additional 10,000,000 gallons of water at such time as required. The contract is for 25 years.

This is the second contract signed for water to be used in pulp and paper manufacture in Aberdeen. The first one was signed by the Pacific States Pulp and Paper Company, shortly after the city authorized the construction of the new $1,600,000 water system.

Plans for the new pulp mill are being rushed in the office of B. T. McBain, Portland, who will have charge of the plant management as previously stated. Mr. McBain has formally given his approval to the contract. Specifications are expected to go east for approval this month.

W. E. Johnson, vice-president of the West Lumber and Pulp Company, signed the water contract, as did Mayor C. M. Cloud and the city clerk.

AFAFAFAFAFAFAFAFAFAFAFAFAFAFAF

TAILOR-MADE FELTS!

...not new to us but perhaps news to you

TAILOR-MADE! . . . not a stock felt made from a standardized pattern to *approximate* your needs, but a felt built to fit a *definite* position on a *definite* machine in *your* mill.

That's what you get when you order an Albany Felt. The very twist and thickness of yarn, the loom pattern, the fulling and shrinking, the weight and tension and nap and finish are all planned in the designing room before an inch of *your* felt is woven.

No two machines are identical; no two positions alike. No standardized felt can possibly meet a multiplicity of conditions adequately.

To insure maximum felt performance use Albany Felts made to meet your own specific working demands and conditions.

Tell the Albany Felt representative every detail of your requirements. His report will be the basis for an Albany "Tailor-made" Felt that will fit your particular needs with the sort of service that holds up under the hard gruelling demands of modern paper production.

Every order for an Albany Felt is a "special" order Every Albany Felt is "tailor-made" to fit specified conditions on the definite machine and position for which it is individually designed.

ALBANY FELTS

TAILOR-MADE BY ALBANY FELT COMPANY, ALBANY, NEW YORK

AFAFAFAFAFAFAFAFAFAFAFAFAFAFAF

New Eagle-A Carton-Crate Packing

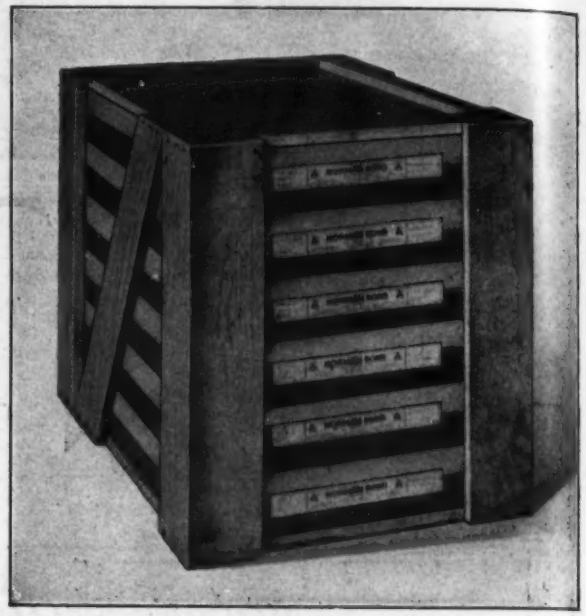
In keeping with the tendency of all industry to standardize and improve shipping and packing methods, Sidney L. Willson, president of the American Writing Paper Company, Inc., has just introduced to the paper trade a new carton-crate method for the packing of flat papers.

The new plan involves first, new individual cartons containing one thousand sheets each, with markers between each 250 sheets to facilitate counting. These cartons weigh 35 to 100 pounds so as to be easily handled by one man. A standard carton previously proposed would weigh 125 to 150 pounds and would require two men for handling.

Then, to simplify car loadings and bulk handling, new crates have been introduced to carry a quantity of these small cartons with a net weight averaging 500 pounds to each crate. This means that quantity orders are handled as easily as in the past under the solid case of reams method, and by one man and a hand truck.

The new packing brings to the paper industry a better package, with many distinct advantages to paper merchants, printers and others along the line of paper distribution.

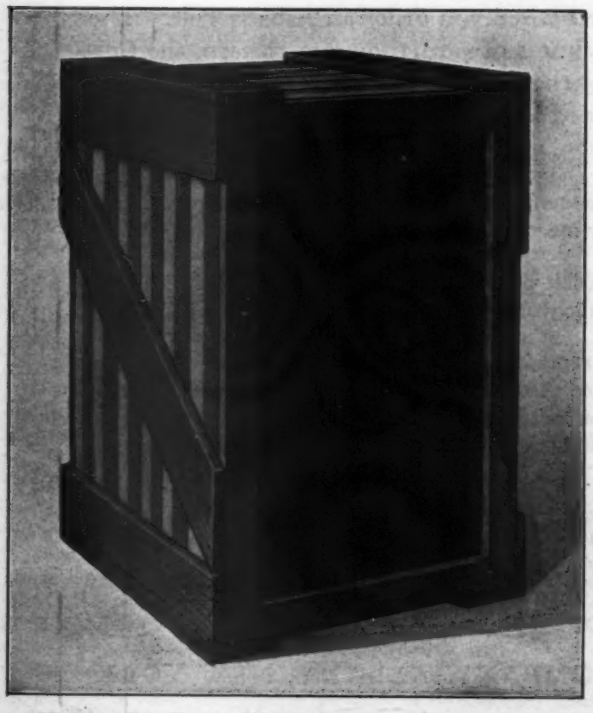
Mr. Willson feels that the characteristics of the new carton-crate method will interest many in the allied industries. They have, therefore, been listed in concise form and are here given along with views of the new carton and crate.



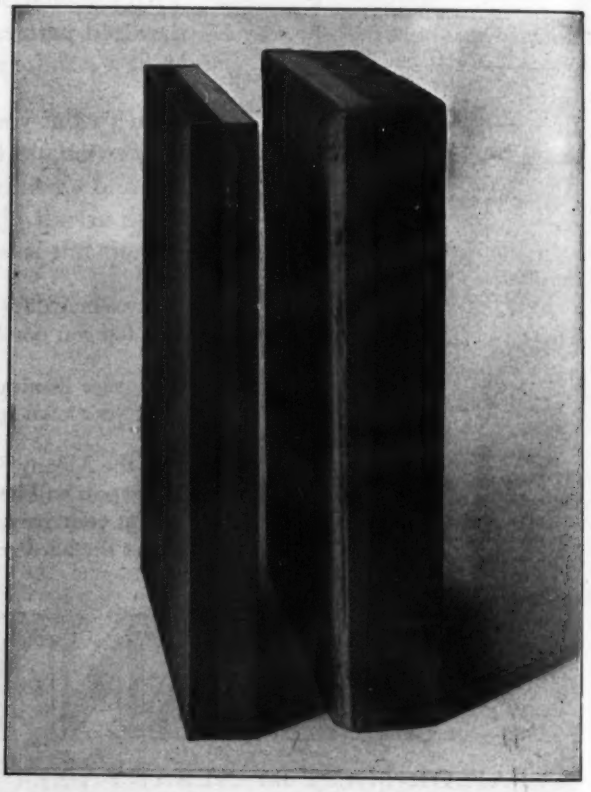
END VIEW OF EAGLE-A CARTON CRATE—SHOWING HOW READILY CONTENTS CAN BE DETERMINED

Cost and Technical Association Meets

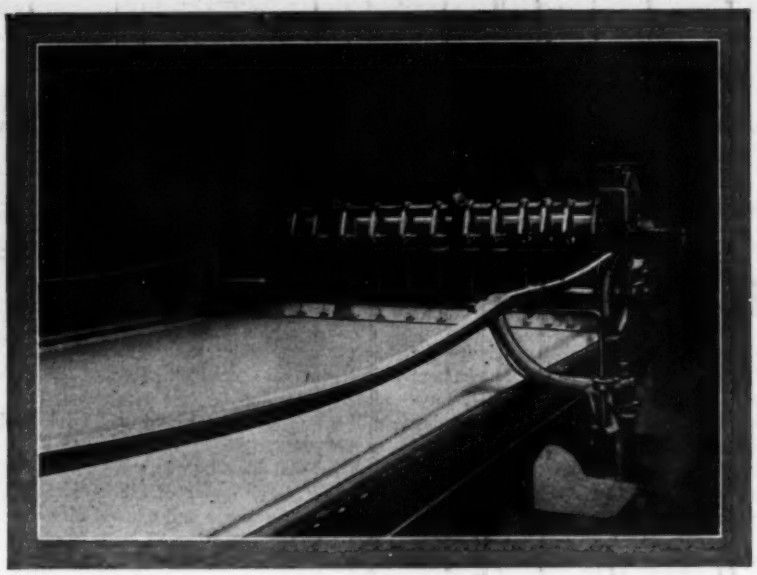
KALAMAZOO, Mich., January 26, 1928.—The Cost and Technical Association met Wednesday evening, January 25, at the Columbia Hotel. Dinner was followed by a paper on "Finishing Machinery from the Mechanical Engineer's Standpoint," by James A. Wise, assistant general superintendent of the Bryant Paper Company. Frank L. Brown, president of the Kalamazoo Valley Division, Norman Cowie of the Hawthorne Paper Company, and Harry C. Bradford, of the Rex Paper Company, discussed finishing room costs.



SIDE VIEW OF EAGLE-A CARTON CRATE



PICTURING—AT THE LEFT—TRIM EAGLE-A CARTON AS COMPARED WITH OTHER CARTONS



The Voith Inlet Pays *All-Year* Profits

This is equipment that will pay its cost out of the profits it earns—the principal reason for the wide acceptance of the Voith Inlet by paper mills everywhere.

While increasing production, the Voith Inlet produces better paper at a lower production cost—fewer wire breaks to cause shutdown of paper machines—10% to 15% longer life to wires—accurate control of stock as it flows onto the wires—paper of uniform caliper is assured—fewer lumps and foam spots.

Aside from these profit-making advantages, economy of operation actually promotes a new cost savings in paper making. A Voith Inlet is a plant investment that pays all-year profits. This fact over 100 mills have learned through 225 installations.

In your mill, too, the Voith Inlet will pay all-year profits. Investigate its possibilities now, at the beginning of another year. Our booklet fully describing the Voith Inlet will be sent upon request. Write for it today.

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Machinery for Paper and Pulp Mills

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Power Plant Section

To Promote the Most Efficient and Economical Distribution of Power

Reducing Power Costs Through Unit Treatment

Conducted by REGINALD TRAUTSCHOLD, Consulting Engineer

Lubricants and Lubricators in Paper Mill Service

To prolong the life of paper mill machinery, to minimize the risks of costly shut-downs, to conserve power to the utmost and to combat effectively the heavy strains and punishment of twenty-four hour operation, with very little let-up for a single functioning unit in pulp and paper production, calls for suitable, adequate and continuous lubrication of every journal in the mill. Exacting as are these conditions, they are made particularly severe by reason of the existance of abnormal heat, heavy bearing pressures, long non-stop runs, high speeds, water washes and the unavoidable inaccessibility of many parts requiring systematic lubrication, which complications are typical of paper mill service. Altogether, the lubrication problem of the modern paper mill is about as involved a one as is encountered in any industry. Friction, water, heat and the clogging of bearings by paper dust, etc., must all be combated, if maximum quantity production is to be attained, quality of product maintained and costs of all kinds kept down.

No attempt will be made here to evolve a lubricant prescription, one or many, by which correct lubrication may be secured, but simply an effort made to touch upon lubricants and lubricators in such a manner as to indicate, at least, economical and efficient ways of making use of those lubricants with which paper mills are familiar. What constitutes correct lubrication should be kept in mind, however, *i.e.*, the complete separation of the moving parts, bearings, gears or guides, with a lubricating film of sufficient body and adhesiveness to support the imposed pressure without breaking through and of characteristics offering the least possible resistance to the rotation of shafts or sidings of contact surfaces. Beyond this, it is not safe to go, for what with the regrettable modern practice of marketing lubricants under trade names, instead of specifications, and the fact that economical considerations of first cost and limited investment frequently command greater weight than lower ultimate costs entailing a heavier investment an unbiased discussion of the lubrication problem which will avoid controversy becomes well nigh impossible.

It is necessary, however, to make some general classification of lubricants in order to be able to consider their suitable application and this may be done by dividing them arbitrarily into greases and oils, both divisions covering wide viscosity, or body, ranges. The divisions also overlap to a certain extent, for, admittedly, there are grease-like lubricants which are oils rather than greases and oils of a consistency of light grease. Heavy viscous oils, moreover, are not the same as soft light greases, nor do either greases, oils or in betweens of similar consistency necessarily possess anything like identical lubricating qualities. Such refinements of lubricants are quite involved and it will always pay to secure expert advice in the selection of lubricants, choosing them on specifications rather than by trade designations.

Grease Lubrication

Practice in approved grease lubrication can well be taken up first, not to advocate it in preference to the modern oiling systems of stream lubrication now so extensively employed by the big mills of this country and Canada, but because there are probably a much greater number of mills depending upon grease lubrication to keep running than there are mills which have turned to a gravity or force feed oil lubricating systems. Unquestionably, proper grease lubrication is comparatively cheap and, if conducted with due care, efficient. In fact, even the leading advocates of automatic oiling systems admit that there are places in the paper mill where a heavy oil and grease lubricating system may be used to advantage.

A sub-classification of greases is almost as difficult and dangerous as is the grouping of lubricants into greases and oils, but the divisions into tallow and mineral-oil greases, of hard, medium and soft grades, will prove of some decided convenience here. The former, beef tallow grease, is what is known as a natural lubricant and very large quantities of it are used annually by the paper mills, conclusive evidence of the favor with which it is held in such quarters.

To function, *i.e.*, lubricate, it must first melt, as all other greases and lubricants of like consistency have to, and, when the proper grade is employed, it furnishes just the necessary film of lubricant needed to prevent harmful overheating of the bearing. It is a peculiarity of this variety of grease that this natural automatic lubricant feed is so sensitively balanced that the lubricant is consumed with the utmost economy commensurate with proper lubrication. That is, waste through dripping and spattering of the melted lubricant is, from the properly proportioned bearing, negligible.

Tests made at the laboratories of Cornell University, which have been closely substantiated under practical operating conditions, indicate that so far as actual lubricating value is concerned a pound of quality beef tallow is comparable to about three pounds of high grade mineral-oil grease or to one gallon of lubricating oil. The tallow grease commands a somewhat higher price than mineral-oil grease, in quantities the ratio being about 1.65 to 1, but despite this it proves a very inexpensive lubricant. At the Terre Haute Paper Company, Terre Haute, Ind., for instance, approximately 2,000 pounds of such grease is used each year, whereas were mineral-oil grease used, 6,000 pounds would be called for.

The application of the grease to journals, etc., since it is what is termed a temperature lubricant, melting to function, has necessitated the development of suitable lubricators for insuring a continuous supply of lubricant. With such incessant demands as those which pertain in paper mill service, few mills dare risk dependence upon the old style grease cup, either of the screw or spring pressure type, filled from time to time by an overworked oiler who may easily miss a bearing or two, there are so many of them in a paper mill, with disastrous results. Particularly is this so, as there are many bearings about paper mill machinery which are very hard to get at. For example, the bearings at the back, or steam side, of dryer rolls are almost inaccessible on account of the driving gears. It is very essential that these bearings be well supplied with lubricant, else bearing surfaces coming in contact with hot journals may carbonize and glaze or seize, seriously interfering or even arresting lubrication.

One common method of overcoming this difficulty is to employ pressure grease lubrication, applying the grease to bearings through nipples and under pressure, by means of a grease gun, pressure hand lubricator or portable lubricant pressure tank. These lubri-

"All Wet"

"ALL WET," in the language of the street, is hardly a complimentary term. But in beater stock, it is a highly desirable attribute. Hydrating—the thorough saturation of every fibre, is the most important function of a beater.

Brushing under the roll is important, but it is the hydrating capacity of a beater, the ability to permeate the stock with water, to preserve fibre length without cutting or weakening, that improves the final product and raises the tests.

The new Noble & Wood High Density Beater achieves complete hydration more effectively than any other beater yet produced. The great mass of stock—triple the usual quantity—vigorously milling, tumbling, crowding and rubbing, forced against itself again and again under compression, separates the fibres, opens the pores and soaks up the water.

Investigate this modern way of hydrating—let us tell you how easily your present equipment can be converted to this new, ultra-efficient type. Write for full information.

NOBLE & WOOD
MACHINE COMPANY
Hoosick Falls New York

cators are too well known to require further description. They possess the very desirable ability of applying the lubrication to the bearings while they, the bearings, are in operation, insuring the application of a uniform film of lubricant in correct amount and under proper pressure, thereby guarding against lubricant wastage. The nipple connectors also serve effectively to prevent the entrance of dirt and grit to the bearing surfaces.

Another development in the line of grease lubrication which has met with considerable favor in paper mill service is the so-called grease brick, to be inserted in closed box-wells in the bearing cap. These lubricants, the bricks, are made in various degrees of hardness to meet different temperature conditions and are especially efficacious in the exacting service of lubricating the journals of paper dryers, where steam pressures of anywhere from 1 pound up to 60 are encountered. Under the condition of service for which the respective grades of approved grease bricks, those free from non-lubricating fillers, are suited, they will retain their brick form and rigidity until completely consumed.

The valuable peculiarity of grease lubrication which makes it both an efficient and economical means of combating journal friction, the fact that it must melt to function and does so in proportion to the demand for lubricant, provides it with a semi-automatic characteristic which is highly desirable, but as the lubricant is consumed it is essential that the grease supply be replenished periodically and whenever it may become low from any cause whatever. While this may not entail the more or less continuous labor that would be required to fill oil cups of limited capacity, it does necessitate a careful and continual watch of all bearings, several hundred of which are to be found in even the small one machine mill. The responsibility is a heavy one and in the mills operated under so-called modern management methods is frequently taken out of the hands of the machine operator and production foreman and entrusted to experienced machine repair men operating under and responsible to the maintenance department.

Oil Lubrication

The tendency in the larger and more progressive mills is, however, to rid themselves so far as possible of any dependence upon the human element in lubricating service, by installing systems of automatic oil lubrication, manual oiling in the paper mill, at least for the main machines, being rarely countenanced these days when maximum production in quantity and quality dominates. True, high grade oil costs considerably more per effective lubricating unit than does quality grease, but in the modern oiling system the oil is used copiously, filtered and used again and again, so exacting maximum service from each gallon of lubricant. As the generous use of oil serves to prevent the lubricating film separating the bearing surfaces from reaching the temperature it attains with grease lubrication, the lubricant is not consumed as rapidly and the margin between the unit lubricating cost of the two lubricants is very materially reduced. In fact, taking in all labor costs and discounting exigencies, the lubricating expense in the long run favors the automatic oiling system, despite the substantially heavier initial equipment investment entailed.

This is shown quite conclusively by the results secured with what may be termed an intermediate stage in the evolution of the modern stream-feed system of lubrication, where the oil is used over and over again. Automatic lubricators which keep the oil reservoirs full when substituted for hand oiling have time after time effected savings in oil consumption of from 25 to 75 per cent. This, in itself, goes a long way toward levelling the costs of lubricating with oil and grease. If the further economy is employed of a central oil circulating and filtering system, in which the same oil is used repeatedly, filtered between its trips through the bearings, the acme in modern lubricating practice is attained without much question, both from the standpoints of economy and efficiency.

While this is a pretty broad statement, the justification for it is evident from the fact that over 80 per cent of all the mills of concerns such as the International Paper Company, the St. Lawrence Paper Company, Port Alfred Pulp and Paper Company and many others, acknowledged leaders in the industry, are now employing such systems and with their assistance are establishing records in economical paper production never before realized. A concrete case is that of the Franklin Box Board Company mill at Franklin, Ohio, with its output of some 150,000 pounds of board every twenty-four hours, where a large Black-Clawson machine is lubricated by such a system. The machine has two hundred and seventy-six bearings and consumes rather less than three gallons of lubricating oil a week. At 80 cents per gallon, this is equivalent to a lubricant charge per bearing of a little over a tenth of a cent a day. Furthermore, since the system is fully automatic and consumes a quite negligible amount of power, such daily expense covers virtually all operating expenses chargeable to lubrication.

With an appropriation of a cent a day for each ten bearings, to cover lubricant and lubricating labor expenses, it is quite obvious that little could be done to keep the machine in efficient operating condition by any system of hand or even of semi-automatic lubrication. An overhead burden imposed by the investment entailed for the system and in its upkeep is chareable against the cost of lubricating the machine, of course, but as this is apportioned over some 85,000 bearing-days, over two million bearing-hours, a year, it could be very much more substantial than it actually is and the installation would still return a very handsome yield on the investment.

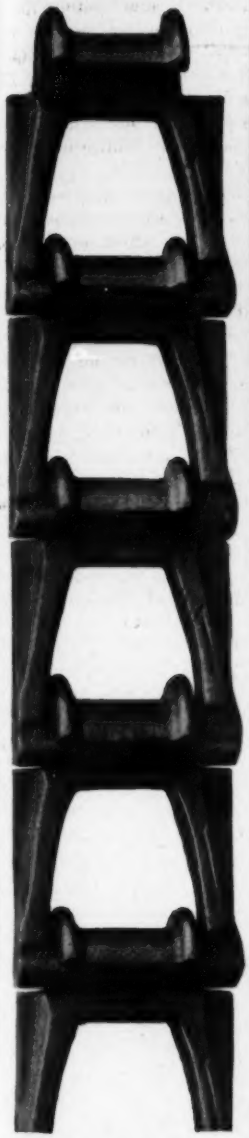
Continuous Oil Circulating and Filtering System

The grade and quality of the lubricant employed in such systems is highly important, naturally, as is also the manner in which the lubricant is applied to the bearings, but the real success of lubrication so conducted, granting the employment of a lubricant of suitable characteristics, lies in keeping the lubricant clean and uncontaminated when fed to the bearings. Unless this is done, dirt and carbon will accumulate, oxidation take place, "muck" form, acid develop and the process of lubrication be seriously interfered with.

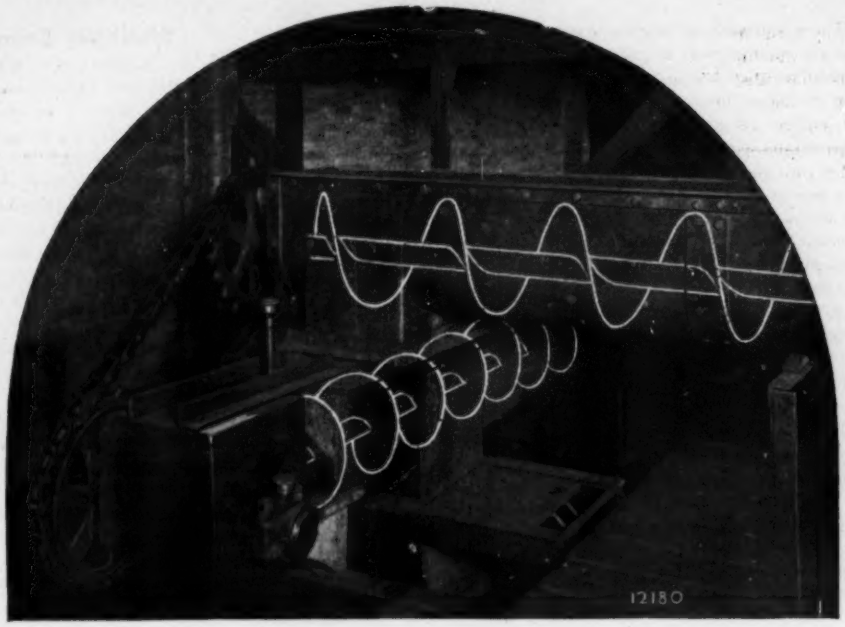
The obvious method of avoiding these disastrous developments is the provision of a plentiful stream of clean, cool oil through the bearings, stream-feed lubrication as it is frequently termed, to wash away impurities, the development of which cannot be entirely eliminated in even the most efficiently lubricated bearing, to maintain a clean bearing surface and to guard against a harmful rise in bearing temperature. Sight feeds installed in the lubricant supply pipe connections to the various bearings, none of which are inaccessible when connected into a closed circuit of piping extending from the clean oil supply tank to the filters, where the oil is thoroughly cleansed, keep the efficient operation of the system in view at all times. A glance at these sight feeds, observation points, will give instant evidence of the satisfactory functioning of the system, so any oiling labor charge is avoided, except in the extremely rare cases of an obstruction forming in the oil piping circuit.

A gravity oil feed is almost always employed with circulating oiling systems in paper mill service, the clean oil supply tank being located at some convenient point above the most elevated of the bearings to be lubricated. From the supply tank, the oil flows to the various bearings by gravity, through feed pipes so arranged as to maintain a constant oil-level in the bearings. The dirt which may form or accumulate is washed from the bearings by the flow of oil out through the drain connection to the piping conveying the used oil to the filters, the oil also carrying away the excess heat as it is generated in the bearings. The filters are located below the lowest bearing to be lubricated and the oil when cleansed is pumped from the filters back to the overhead clean oil supply tank, from which it again passes through the bearings, washes them and cools them. This cycle is repeated continuously, the only operating expenses involved being the trivial burden for the power needed for pumping the oil from the filters to the clean oil supply tank, a small charge for a little make-up oil to replace the slight oil shrinkage through loss and consumption in the discharge of the system's functions and the cost entailed in the upkeep of the filters, which is no great burden.

Jeffrey Chains for Every Service



Jeffrey Detachable Chain for drives, conveyors and elevators. Quick replacements.



Spirals for Fine Coal

Mills getting their power from fine coal install Jeffrey Spiral Conveyors.

The flights on Jeffrey Spirals fit the pipe with a LOCK GRIP so tight that under almost any ordinary service they work equally well with or without intermediate lugs. The intermediate lugs are provided, however, as an additional support.

Collars on the end of the pipe provide a strong support for the end lugs and increase the effectiveness of the coupling bolts.

The cost of a Jeffrey Spiral Conveyor is low, as the trough is practically a box girder and forms its own support.

Furnished in either Sectional or Helicoid flights, 4 to 20 inch diameters.

In the photograph shown above, the upper spiral is carrying coal from the pulverizer to the lower spiral which distributes the coal to the bunkers.

The Jeffrey Manufacturing Company

931-99 North Fourth St., Columbus, Ohio

New York, Buffalo, Rochester, N. Y., Philadelphia, Pittsburgh, Scranton, Pa., Boston, Cincinnati, Cleveland, Charleston, W. Va., Chicago, Detroit, Milwaukee, St. Louis, Denver, Salt Lake City, Los Angeles, Birmingham, Charlotte, N. C., Montreal

51 YEARS OF SERVICE TO INDUSTRY

JEFFREY

MATERIAL HANDLING EQUIPMENT

Jeffrey Products

Elevators
Conveyors
Portable Loaders
Coal and Ashes Handling Equipment
Skip Hoists
Chains and Attachments
Sprocket Wheels—Gears
Crushers—Pulverizers
Sand and Gravel Handling, Washing and Screening Equipment
Locomotives
Coal Mine Equipment
Tipple Equipment
Ventilation Fans

The installation of such a system calls for no extensive alteration or modification of paper making equipment, for ring, chain and collar oiled bearings lend themselves admirably to the application of stream lubrication, and there are also standard bearings on the market today which are designed especially for stream feed lubrication. Even machinery with plain bearings can readily be piped into such a system successfully, which, except for the filters and pumps, contains nothing of a costly character. Furthermore the filters and pumps are not costly, being standardized equipment extensively used and manufactured under the modern production methods essential for the marketing of such products on narrow margins. Each installation is of necessity somewhat special, it is true, but today the continuous circulating system of lubrication can be applied cheaply and efficiently to any and all services from the lubrication of open gearing to that of any bearing in the paper mill, not excepting the heavy duties of successful calender lubrication and of oiling hot bearings on dryers, etc.

Occasionally, in calender lubrication a force feed lubricating system, in which instead of the oil being fed by gravity to the bearings it is forced into the bearings under pressure, is resorted to. Ordinarily, however, the gravity feed system suffices admirably for all paper mill service. It is an efficient, dependable and highly efficient system of continuous, automatic lubrication for the paper mill striving for standards of high efficiency and economical operation. It has been said that a certain mill, having a daily output of some 330 tons of papers, where such a system is installed, operated for a year on the consumption of approximately only one barrel of lubricating oil.

Saranac River Power Development

PLATTSBURG, N. Y., January 23, 1928.—Saranac Utilities, Inc., chartered a few days ago to deal in water power, dam sites, and kindred projects, may merge with the Saranac River Power Corporation, according to announcement by T. Harvey Ferris, of Utica, who is interested in the project. The development of the Saranac River power is expected to benefit pulp and paper mills in Plattsburg and vicinity and may result in the establishment of additional mills.

According to Mr. Ferris, Saranac Utilities, Inc., is a corporation formed according to contracts made with the Saranac River Power Corporation, with the view of merging certain power on the Saranac River. The Saranac River Power Corporation is the owner of 3,500 developed horse power on the river a short distance west of Plattsburg. Saranac Utilities has acquired title to approximately 5,000 horse power, of which 2,500 is developed. The proposed merger is now before the Public Service Commission for approval.

Mr. Ferris stated that contracts for the sale of the total output of both plants to several industrial concerns in the Plattsburg section await only the Public Service Commission's approval of the project.

Increase in Finnish Pulp Exports During 1927

WASHINGTON, D. C., January 25, 1928.—Exports of pulp and paper from Finland during the first 11 months of 1927 were valued at approximately $38,423,196 as against $36,730,000 during the preceding year, according to the Paper Division of the Department of Commerce.

Increases were registered in exports of mechanical pulp, which rose from 32,869 to 45,759 tons, and of news print and wrapping papers, which rose from 66,402 tons and 13,728 tons to 71,426 tons and 16,035 tons, respectively.

Exports of chemical pulp and boards each fell off by about 2,000 tons, shipments of the former dropping from 17,802 tons to 15,815 tons and of the latter from 19,126 tons to 17,120 tons.

Over one-third of the total exports went to the United Kingdom and Ireland, the United States, which took $6,799,338 worth, and Russia, which took $6,669,886 worth, ranking second and third in importance. About half as much as was taken by the latter countries was shipped to Germany.

Sisalkraft Company Rapidly Expanding

C. K. Higgins, who was formerly assistant secretary of the National Paper Trade Association and was in charge of the wrapping paper division for seven years, is now visiting the larger cities of the Pacific coast territory in his capacity as sales manager of the rapidly expanding Sisalkraft Company of Chicago. On his trip, which will take about two or three months, Mr. Higgins will visit and renew friendships with many of the west coast paper merchants. He will spend some time in all of the more important industrial centers from San Diego, California, to Seattle, Washington.

Many of the country's best known paper merchants became acquainted with Mr. Higgins when he was connected with the National Paper Trade Association, and when he resigned his position with the association in November, 1926, he became affiliated immediately with the American Reenforced Paper Company as Western sales manager. Under Mr. Higgins' direction sales have increased to such an extent that two subsidiary selling companies have been launched within the last six months. One of these companies, the Sisalkraft Western Corporation, with offices at Denver, Los Angeles and San Francisco; the other, the Sisalkraft Products Company, is located in Pinehurst, N. C.

So many of Mr. Higgins' old friends who knew him when engaged in association work have become distributors for Sisalkraft and Fibreen that he will be but renewing old friendships when he sees them on this western trip. Invitations to visit them have poured in from paper merchants all over the country, as the new products have proven remarkably profitable and therefore popular with the distributors. Both Sisalkraft and Fibreen are patented and they gave such a diversified and increasing number of uses that the demand is mounting surprisingly fast. As the field for them is so large and new uses are being discovered every day, the dealers are anxious to see Mr. Higgins and discuss the latest information concerning these products. Mr. Higgins is endeavoring to visit as many of these friends as he possibly can in the time at his disposal.

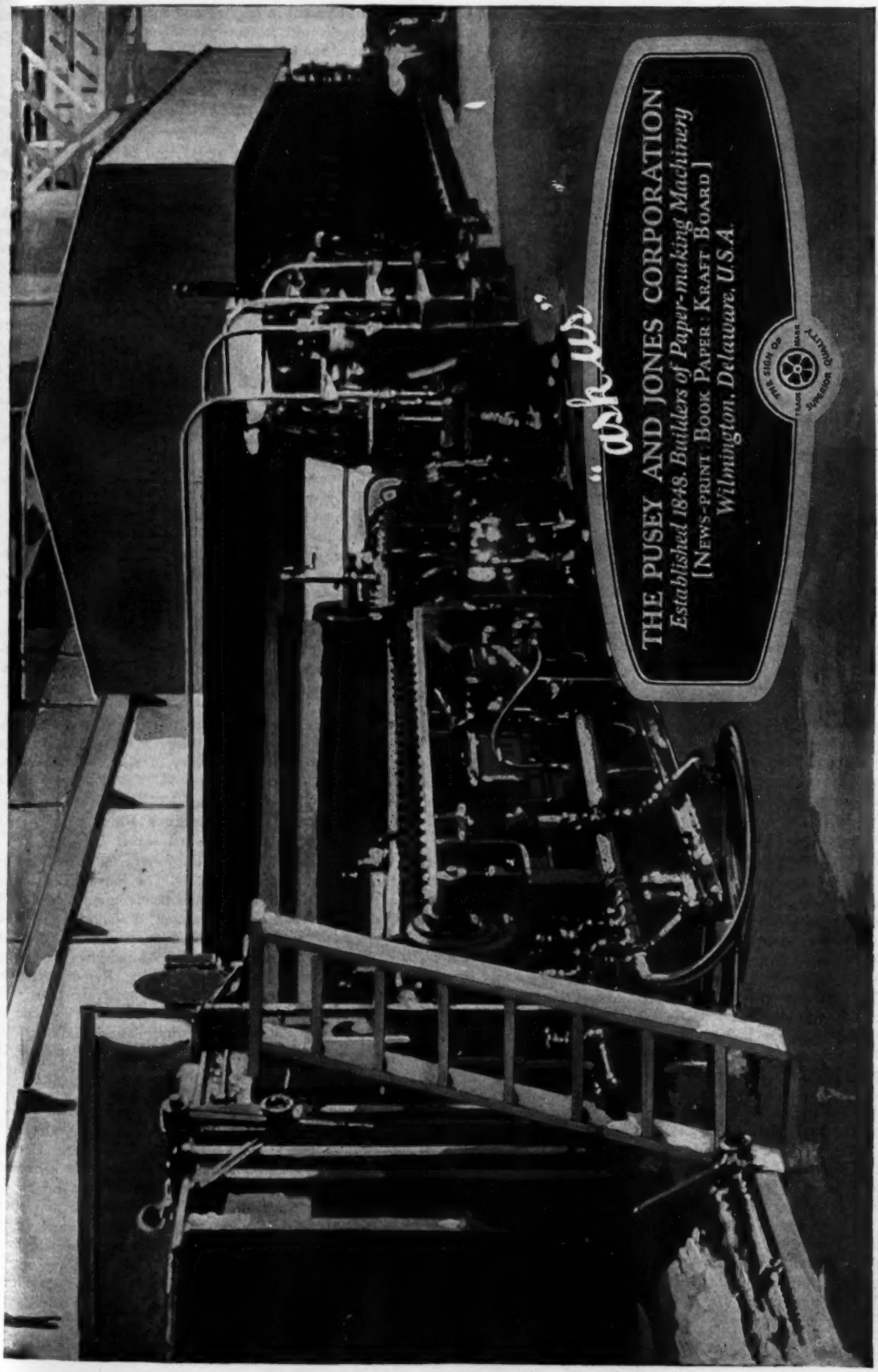
With a skeleton organization already functioning on the Pacific Coast, officials of the Sisalkraft Company state they will soon have their distribution so perfected that all demands can be met on very short notices. Many of the largest and best known paper merchants are distributing Sisalkraft products throughout the country. Among those organizations handling Sisalkraft and Fibreen are: John Leslie Paper Company, Minneapolis; Chope-Stevens Company, Detroit; Whitney Brothers, Boston; George W. Millar & Co., New York; Coy-Disbrow Company, New York; C. B. Hewitt Company, New York; Ringel Brothers, Newark; J. L. N. Smythe Company, Philadelphia; Whittaker Paper Company, Cincinnati and Baltimore; Alling & Cory, Pittsburgh; and Kansas City Paper House, Kansas City and Omaha.

St. Regis Directors Elected

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., January 16, 1928.—The annual stockholders meeting of the St. Regis Paper Company, held during the week at Watertown, elected one new director, Roy K. Ferguson. Other directors of the company re-elected are B. M. Anderson, Watertown; F. L. Carlisle, New York; Jonathan Bulkley, New York; John N. Carlisle, Watertown; A. N. Dick, New York, W. K. Dick, New York; F. A. Empsall, Watertown; H. E. Machold, New York; R. B. Maltby, New York; D. C. Middleton, Watertown; Alvah Miller, New York; C. E. Norris, New York; J. J. Warren, Brownsville; and B. B. Taggart, Watertown.

The stockholders voted to increase the number of shares of the company from 800,000 to 1,100,000. Previously the company had 50,000 shares of seven per cent cumulative preferred stock of a par value of $100 a share and 750,000 shares of common stock without par value. Under the new plan the company will have 100,000 shares at seven per cent preferred stock and 1,000,000 shares of common stock.


THE PUSEY AND JONES CORPORATION
Established 1848. Builders of Paper-making Machinery
[NEWS-PRINT BOOK PAPER KRAFT BOARD]
Wilmington, Delaware, U.S.A.
THE SIGN OF QUALITY

Illustrating one of the two 168-inch Bond Paper Machines, designed and built in 1926 by The Pusey and Jones Corporation for Fraser Paper, Limited, Madawaska, Maine

Entire contents of this advertisement copyrighted 1927 by The Pusey and Jones Corporation, Wilmington, Delaware, U. S. A.

New York Trade Jottings

E. A. Wallberg, president of the Lake St. John Power and Paper Company, of Dolbeau, Quebec, was a prominent New York visitor last week.

* * *

Many prominent members of the local paper industry are in Montreal this week attending the convention of the Canadian Pulp and Paper Association and the annual meeting of the News Print Service Bureau.

* * *

The regular weekly meeting and luncheon of the New York Division of the Salesmen's Association of the Paper Industry, was held at the Canadian Club last Monday, when an interesting session was enjoyed by those present.

* * *

The Hudson Bag Company and its subsidiary, The Moore and Thompson Paper Company, will again act as hosts during Convention week. They have engaged a suite of rooms at the Waldorf-Astoria, and promise to surpass their last year's splendid social program.

* * *

The Walker-Goulard-Plehn Company, Inc., mill distributors of paper, have taken title to the old headquarters of the Maurice O'Meara Company at 448-450 Pearl street, New York, so that they can now truly call themselves "The Old House With the New Name at the Same Old Address." Judging from the unusually fine sales record which the Walker-Goulard-Plehn Company has made since March 15 last, when they succeeded the Maurice O'Meara Company, the new organization is assured of a successful future.

* * *

D. S. Gottesman, president of M. Gottesman & Co., Inc., was re-elected chairmaan by the directors of the Central National Bank at the last meeting of the board. Banking circles are commenting most favorably on the growth of the Central National Bank whose total resources are now in excess of $14,000,000, an increase of 40 per cent, and the deposits being more than $10,000,000, an increase of 50 per cent during 1927.

The Central National Bank was organized in January, 1926, and has made a most enviable record during the two years of its existence. The Central National Bank has already opened two branch offices and the program of expansion calls for three or four additional branches to be started during 1928.

* * *

The outstanding feature of the annual dinner of the Kansas Society of New York on Monday evening, January 30, will be the presence of Governor and Mrs. Paulen, with General James G. Harbord as toastmaster. The other principal speaker at the dinner will be Thomas J. Riley, executive secretary of the Brooklyn Bureau of Charities, whose topic will be "A New Profession—Social Service." President J. L. Howe of Highland College, the oldest educational institution in Kansas, who is in New York at this time, will also be a guest at the dinner. Governor and Mrs. Paulen, after visiting Washington, will arrive in New York on Saturday, January 28, and will stay at the Hotel Pennsylvania. On Sunday they will be guests of President R. S. Kellogg of the society on an automobile drive through Westchester County and dinner at his house in Yonkers. On Monday, January 29, the Governor will be a guest at a private luncheon at the Bankers Club given by Henry Wollman, whose mother was one of the most prominent pioneer women of Kansas, and from two to four p. m. on that day the Governor will be the guest of the "Curtis for President Club" at the Curtis headquarters, 253 West 52nd street. The twenty-third annual dinner of the Kansas Society of New York will begin at 6:30 p. m. on January 30 in the Southeast ballroom of the Hotel Pennsylvania. In addition to the speaking program, Victor Larsen, baritone, will appear, and the remainder of the evening will be spent in dancing and social intercourse, so that all may have opportunity to meet the Governor and Mrs. Paulen, who have made a special trip from Kansas for this purpose.

Zellerbach Sales Managers Meet

SAN FRANCISCO, Cal., January 19, 1928.—Sales managers of the Zellerbach Corporation and its subsidiary and affiliated companies met in San Francisco December 12, 13, and 14 with headquarters executives and department managers in the first annual Zellerbach Sales Managers Conference.

Rollin C. Ayres, advertising and educational director of the Zellerbach Corporation, presided at the meetings. Mr. Ayres arranged the program and assigned various subjects to different sales managers for papers and discussions at the meetings. These papers were written by the men and were given from manuscript by those who attended the sessions.

There were about sixty-six who attended from Oakland, San Jose, Stockton, Sacramento, Fresno, Los Angeles, San Diego, Portland, Eugene, Seattle and Spokane where the Zellerbach Paper Company operate on the Pacific Coast.

The companies represented in the conference are the Zellerbach Corporation, the Zellerbach Paper Company, the National Paper Products Company, the Sanitary Products Corporation, the Washington Pulp and Paper Company and the affiliated company, Fibreboard Products, Inc. All of these companies are affiliated companies of the Zellerbach Corporation.

Meetings were held in the Zellerbach assembly hall. There were dinners, a theatre party, a smoker and other events of entertainment each evening during the convention. On December 15 the delegates were taken to Stockton, Cal., to visit the board mill of the Fibreboard Products, Inc., one of the largest board mills on the Pacific Coast.

The problems discussed were chiefly sales work in the printing papers, wrapping papers, paper specialties and sanitary products. Many helpful suggestions were brought out which will undoubtedly result in increased sales in the more profitable lines of merchandise.

This sales managers' conference was the first to be held by the Zellerbach Corporation but the enthusiasm shown during the conference demonstrates the advisability of making it an annual affair.

Boston Paper Business Fair

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., January 23, 1928.—Business in the paper market continues fair, with a nominal demand. The spurt hoped for at the beginning of the year in ledgers and bonds has not developed, although dealers have had a good volume of inquiries and look for orders as a result before long. Book papers are rather quiet, but in this commodity as well, a number of inquiries have been received. Box board shows some improvement. Rumors of lower prices on the part of some of the smaller mills are heard for filled news board and chip board which have been quotable at $47.50 and $45, respectively, for some time. The market for old papers, bagging and rags is reported quiet, with no change in prices.

Machinery Organization Changes Name

BIG RAPIDS, Mich., January 23, 1928.—The Machinery Corporation of America, of Big Rapids, Mich., has changed its name to the Covel-Hanchett Company. The management and personnel of the company will remain the same as heretofore, but in view of the important changes in machinery manufacture being developed by the Covel and Hanchett factories incident to their purchase of the highly specialized line of precision grinding machinery heretofore developed under the name Wilmarth & Morman Company, it is deemed fitting that the title of the sales company—"Machinery Company of America," should be changed to embody the Covel and Hanchett names.

News of the Boston Paper Trade

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., January 23, 1928.—The Charles A. Esty Paper Company has announced the removal of its Boston office to 288 Congress street, where ample space in sales room and warehouse better enables the firm to carry out its program of merchandising high grade papers in New England.

The next meeting of the Boston Paper Trade Association is to be held Wednesday, March 21, at the Algonquin Club. The name of the speaker is to be announced later.

The United Paperboard Company, Inc., and the Wabash Coating Mills, box board and special products, have opened an office at 683 Atlantic avenue, Boston, under charge of P. E. Allen, formerly mill manager at the Benton Falls Mill in Maine. Associated with Mr. Allen is E. J. Smith, formerly the Boston representative.

Norman Harrower, of Linton Brothers Company, Fitchburg, Mass., manufacturers of card board, was the speaker at the meeting of the John Carter salesmen Saturday morning, January 21.

John Carter & Co., Inc., has received a new line of samples of high grade box papers made by the District of Columbia Paper Company, Washington, D. C.

J. B. Reed, for the last two years manager of sales promotion for Stone & Forsyth Company, has resigned his position, but will continue as a member of the sales force. Kenneth P. Pond has been advanced to the position previously held by Mr. Reed. His former duties as manager of the wax paper department have been assigned to James Dwire.

John Murphy, of D. A. Murphy & Co., Inc., and Mr. Sheedy, Jr., of the Groton Leather Board Company, West Groton, Mass., called on the trade last week.

The Rinkle Crinkle Paper, capitalized at $100,000, has incorporated. The incorporators are Harold A. Myers, Estelle C. Tefft, of Boston, and Jasper Derry, of Medford, Mass.

Dexter & Sons Complete New Building

WINDSOR LOCKS, Conn., January 23, 1928.—In the line of industrial enlargement or improvement in this town during the past year the principal mark of increased business was shown by the paper manufacturing plant of C. H. Dexter & Sons which has just completed a large addition to the plant in the erection of the four story building used for business purposes and the shipping department of the mill. This addition is 80 x 98 feet, of concrete and brick construction, attached to the north end of the mill and provides needed room for the increasing business of this prosperous firm. On the occasion of an informal opening of the new building, recently, many visitors from at home and from the neighboring cities viewed the mill in operation while on the inspection of the new offices and other parts of the addition. To many it was quite a treat to see how paper is made in an up-to-date mill and how this firm provides for the safety and comfort of its employees. This latest addition to their plant is an evidence of the successful business built up by the company on the high grade of goods turned out and a good sign of the prosperity that has abounded in that plant for the past year or more and which bids well for continuance.

Standard Paper Co. To Increase Stock

KALAMAZOO, Mich., January 23, 1928.—Stockholders of the Standard Paper Company at the annual meeting held January 16 in the company's offices, authorized the directors to increase the capital stock from the present capitalization of $800,000 to $1,000,000. According to B. C. Dickinson, president of the company, the purpose of the new issue is to finance a program to increase the output of the concern. This program is at present in a formative state. The new stock when offered, will first be offered present stockholders.

The financial statement showed that 1927 has been an excellent one for the Standard and the outlook for the future is flattering.

Latrobe Paperboard Co. Buys Plant

The paper mill formerly of the Barrett Company at Lathrobe, Pa., has been sold by the Gibbs-Brower Company, Inc., paper and pulp mill brokers, 261 Broadway, New York City, to the American Industrial Company of 342 Madison avenue, New York City, together with Pittsburgh banking interests.

The name of the new company is the Latrobe Paperboard Company with general offices at Latrobe, Pa.

Among the officers of the new company will be: President and General Manager, Mr. F. B. Oldham, 342 Madison avenue, New York City; Treasurer, Mr. Chauncey M. Smith, Pittsburgh, Pa.;

FORMER PLANT OF BARRETT CO. AT LATROBE, PA.

Directors, Mr. F. B. Oldham, 342 Madison avenue, New York City; Frank D. Sinclair, Steubenville, Ohio; Chauncey M. Smith, Pittsburgh, Pa.

The mill expects to be in operation by the middle of February and will produce light weight chip board and specialties. This is a very fine mill property and one which is complete in every way and with a very fine location. The Barrett Company purchased it from the old Peters Company a number of years ago.

Loomis Talc Organization in New Offices

GOUVERNEUR, N. Y., January 23, 1928.—The W. H. Loomis Talc Corporation has completed construction work on its new office building and is now occupying it. The building is of striking appearance, being of Spanish architecture with ionic pillars at the front. It is two stories high, with basement, 60 x 28 feet. Ground was broken for the building in the fall of 1926 but the work was delayed due to experiments in the matter of construction and materials used.

The main floor includes the office of the president, W. H. Loomis, and adjoining are the offices of W. Leonard Caten, vice president and sales manager, and A. Prescott Loomis, assistant secretary and purchasing agent. The first floor also contains space for the bookkeepers and stenographers as well as a laboratory. In the basement is located a most modern research laboratory while the second floor is given over to the engineer's office.

Brotherhood to Retain Headquarters

ALBANY, N. Y., January 23, 1928.—The International Brotherhood of Papermakers will retain the present headquarters building near the State Capitol, according to a decision of the executive board which has been considering a project for the sale of the present building and the erection of a new and smaller structure for union purposes. The headquarters building now in use was purchased several years ago by the Brotherhood for approximately $12,000. Albany real estate values have increased so rapidly that the building is now worth around $40,000.

Frank P. Barry, vice president of the Brotherhood, who is at present the only union organizer in the field, is located in northern New York, where he will spend several weeks in organization work dividing his time between Pyrites, Potsdam and other mill towns.

PAPER TRADE JOURNAL
ESTABLISHED 1872

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Power Engineering Consultant

Member A. B. C. Audit Bureau of Circulations

Vol. LXXXVI New York, January 26, 1928 No. 4

COMING EVENTS

Fifty-first Anniversary of the American Paper and Pulp Association. Convention and Meeting of Affiliated Associations, Waldorf-Astoria Hotel, February 20-23. Annual Meeting, Tuesday, February 21. Annual Banquet, Grand Ball Room, Thursday, February 23.

National Paper Trade Association of the United States. Convention, Waldorf-Astoria Hotel, February 20-22. Theatre Party, Selwyn Theatre, "The Royal Family," followed by Supper-Dance at the Cascade, Biltmore Hotel Tuesday, February 21.

Technical Association of the Pulp and Paper Industry. Convention, Waldorf-Astoria Hotel, February 20-23. Annual Banquet, Hotel Commodore, Wednesday, February 22.

Salesmen's Association of the Paper Industry. Annual Meeting, Waldorf-Astoria Hotel, Thursday, February 23. Annual Banquet, Roof Garden, Monday, February 20.

New York Association of Dealers in Paper Mill Supplies. Annual Banquet, Hotel Astor, Wednesday, February 22.

National Association of Waste Material Dealers, Annual Banquet, Hotel Astor, Wednesday, March 21.

Canadian Pulp and Paper Association. Convention, Ritz-Carlton Hotel, Montreal, January 25-27. Annual Banquet, Friday, January 27.

A NEW PAPER DICTIONARY

The new edition of "Classification and Definitions of Paper" will be ready for distribution in a few days. The book has been in process of revision for almost a year past and in addition to making necessary corrections a considerable number of new definitions have been added, making the new edition contain 108 pages as compared with 88 pages in the original edition.

The "Definitions of Paper" were first run serially in the PAPER TRADE JOURNAL in 1923. The great value of the work to the paper industry and paper trade was instantly recognized by many representative paper men, and, owing to an insistent request the definitions were printed in book form in 1924.

The preface to the edition said in part: "In connection with the program on the standardization of paper, which was begun by the Bureau of Standards August, 1921, committees were appointed to consider various phases of the program and to make reports to the Bureau. Reports from the committees on "Classification" and "Definitions" which were received by the Bureau of Standards late in 1922, were correlated and the data were sent to the various committees that are cooperating with the Bureau in regard to the standardization of paper and to other interested organizaitons. During the early part of 1923 a number of constructive criticisms and suggestions were received and the Committees revised the first classification and list of definitions to conform to these suggestions. This revision was especially necessary in order to harmonize the work of the two above mentioned committees.

"In view of the fact that the primary aim of any classification of paper is the collection of statistics regarding manufacture, it has seemed necessary to base the proposed classification primarily upon methods of manufacture. For this reason, no attempt has been made to consider the great number of special uses or converted products which are familiar to the paper merchant and the consumer. Rather, the classification has been based upon the product as it leaves the mill. It is well recognized that the use to which certain papers are put has become so intimately connected with manufacture and merchandising that these terms have come to represent definite types of paper. On the other hand, certain types of paper made for stock are adapted to a variety of uses and, therefore, it has not been considered feasible to do more than to consider the stock type in this classification. In reality, the terms adopted in this classification indicate those types of papers that are fundamentally the products of the paper mill.

"The definitions of the main classes of papers are distinguished from the remaining definitions by having the classification number placed immedately after the name. These definitions should be considered as having been written after the classification was drawn up; sub-groups have in the majority of cases been defined in terms of the groups and therefore these definitions should not be considered without also considering the group definition. For example, "Enameled Blotting" is defined as "A commercial blotting to which a coated or enameled paper has been pasted." In order to clearly understand this definition, one must refer to the definition of the group "Commercial Blottings," and the class "Absorbent Paper."

"In the list of definitions there have been included as far as possible: (a) The basic paper terms used in the classification (identified by the classification numbers); (b) the various commercial papers, the names of which have, in most instances, grown out of special uses to which the papers have been put; (c) various converted articles made from paper; (d) standard sizes of papers; (e) special finishes of papers; (f) miscellaneous paper terms. Wherever possible, all definitions have been referred to those papers which appear in the classification.

"In the preparation of these definitions the Committee has made use of all available published data and of the many suggestions received from the industry and trade, through the various sectional committees. The Committee on Definitions acknowledges its indebtedness to these sources and expresses its appreciation of the cooperation of all who have assisted in any way. In spite of such aid, however, the committee realizes that these definitions cannot be considered in any way the final word. On the contrary, they are to be regarded as suggestions only, from which, by discussion and criticism, we may hope eventually to arrive at definitions acceptable to the industry and trade. The committee will welcome such discussions, which should be sent to the chairman, C. J. West, National Research Council, Washington, L. C."

The first revision of the "Classification and Definitions of Paper" has been prepared under the auspices of the following committee, appointed by the American Paper and Pulp Association: R. F. McElwain, Chairman, Crocker-McElwain Company; Clarence J. West, Vice-Chairman, National Research Council; L. C. Anderson, W. B. Oglesby Paper Company; W. L. Carter, Nashua Gummed and Coated Paper Company; P. S. Hanway, American Paper and Pulp Association; W. G. MacUaughton, Technical Association of Pulp and Paper Industry; E. O. Reed, Office of Public Printer;

B. W. Scribner, Paper Section, Bureau of Standards; Morgan H. Thomas, Garrett-Buchanan Company.

The editorial work on the revised edition was done without compensation by Dr. Clarence J. West, whose fine spirit of cooperation has led him in a similar generous spirit to make numerous other important contributions to the American literature of paper making.

The price of the new edition, although considerably enlarged, has not been increased but has been continued at the old figure of $1.50 per copy. The old price was retained in order to give the book as wide circulation as possible, which it was felt would help in accomplishing the purpose of the committee who personally have given generously of their time to bring about the publication of the new work. The new edition will be distributed by the Lockwood Trade Journal Company, Inc., 10 East 39th street, New York, to which concern orders should be sent.

Pulp and Paper Pacific Northwest

PORTLAND, Ore., January 20, 1928.

Editor PAPER TRADE JOURNAL:

In an article entitled, "Pulp and Paper, a Fundamental Industry," Dr. Hugh P. Baker, Secretary of the American Paper & Pulp Industry, has slipped his decimal point when talking of the acreage needed for a 100 ton sulphite or sulphate mill.

It is true that in the East, 3 to 4 cords per acre is a good stand and in the last annual report of the International Paper Company, quoted in the Paper Press with many millions of acres, the average was shown as 3.76 acres.

Pulp lands in the Pacific Northwest are entirely different in nature. The poorest of the cut-over lands allowed to stand will go 20 to 30 cords per acre and 80 to 120 cords per acre in good stands shows land not much above the average.

A 100 tons daily take 200 cords of pulpwood measured after the removal of the bark.

B 30,000 tons annually require 60,000 cords.

C A tract, therefore, of one million cords will carry a plant over 16 years without any outside aid and without any natural growth. However, a tract bought today will cut 16 years from now at least 50 per cent more wood than it will cut today, so one million cords today, with natural growth, should be sufficient for 25 years' supply particularly if none of it is used for a few years, which is not necessary now with so much available logging camp and saw mill waste larger than Eastern cordwood.

D One millions cords at 80 cords per acre shows only 12,500 acres required to supply this quantity of wood.

E One million cords at 120 cords per acre will call for only 8,000 to 8,500 acres instead of 100,000 to 250,000 acres as Secretary Baker reports.

F Even if only 40 cords per acre, 25,000 acres would fill the bill so I think Dr. Baker slipped his decimal point or used the slide rule when he figured 250,000 acres, for it would only be 4 cords per acre if that many were necessary and this would be no better than the average stand in the East.

G Good pasture land in the Pacific Northwest will have more pulp wood on it than 4 cords per acre.

This is not a joke; this is sent to the press in the best of spirit and for correction only of a wrong impression regarding the Pacific Northwest as a pulp wood and pulp possibility.

Remember I can show anyone who will come, pulp wood as heavily growing as 200 cords per acre and I know where there are stands of spruce 200,000 ft. per acre showing close to 450 cords per acre including the small stuff from 16" down which is not counted in the cruise when that kind of timber is cruised for logging purposes.

The Pacific Northwest is in a class by itself in timber, in pulp wood and will be in pulp mills.

But, why should a pulp mill own and produce timber any more than a flour mill should own and produce wheat?

If a 100 ton pulp mill producing 30,000 tons of pulp annually carries one million cords of wood in timber costing say one million dollars, the carrying charge will be at least 7 per cent in interest on Preferred Stock and about 2 per cent in taxes, risk from fire, etc., which at a total of 9 per cent equals $90,000 annually or $3.00 per ton of pulp just for insurance in the way of a wood supply for the future.

For the past 20 years pulp wood stumpage has been on the decline in value rather than on the increase and today pulp wood on the stump in Oregon and Washington can be purchased cheaper than in 1908. This, of course, does not mean that in 1948 it will still be cheaper. However, in 1908 everyone was advising the purchase of timber to avoid a shortage in the future.

The person who spent one million dollars in 1908 finds himself with at least three million dollars charged against his timber today, while it is still worth not over one million.

I believe pulp mills might be better off with one million dollars extra capital in stock in the treasury ready to sell for purchase of pulp wood when it begins to increase in cost, and 20 years hence the firm will be better off, financially, with a good supply of wood available at less cost per cord than in the case of the one who buys even at today's prices.

However, even though Dr. Baker thinks 100,000 acres necessary, still the pulp mills in Oregon and Washington will be far ahead of the ones in the East from every other point of view as well and practical technical pulp manufacturers who have checked me up on this have agreed to a man.

B. T. MCBAIN.

Paper Machines Closed Down in Hudson River Plant

[FROM OUR REGULAR CORRESPONDENT]

CORINTH, N. Y., January 23, 1928.—Five paper machines in the Hudson River plant of the International Paper Company will be closed down Monday morning for an indefinite period, the suspension affecting approximately 350 employees. Announcement of the proposed shutdown was made by Clinton V. Cassidy, general manager of the mill, in an official bulletin. The white news machines, numbered from five to ten, are the ones affected. Employees in the finishing, cutter, wood and rewinder departments will be idle as a result of the shutdown as well as fifty employees of the Curtis Pulp Mill, which is operated by the International Paper Company.

No mention is made of a contemplated change in the machinery. The bulletin stated that a low market existed on the white news print manufactured here and it is believed the mill will be ultimately completely changed for the production of colored and wrapping paper.

It has been rumored here for some time that the five small machines, Nos. 5, 6, 7, 8 and 9, would eventually be removed to make way for two machines of the largest type, but this has not been verified by officials of the company.

Zellerbach Paper Co. Opens Eugene Division

[FROM OUR REGULAR CORRESPONDENT]

SAN FRANCISCO, Cal., January 19, 1928.—As a result of the recent establishment of a division of the Zellerbach Paper Company at Eugene, Southern Oregon, Coos Bay and Klamath Falls territory are getting quicker service than when these districts were served from the Portland division of the company.

Z. N. Agee is manager of the Eugene Division in which a complete line of printing papers, printers' supplies, wrapping paper and miscellaneous items are carried.

The new one-story building housing the Southern Oregon branch is of concrete 50 x 150 feet and has been constructed so as to carry an additional story should expansion warrant. A mezzanine floor is a feature.

The Zellerbach Corporation now owns and operates fifteen divisions on the Pacific Coast located in strategic points along the coast from Seattle to the north and San Diego to the south.

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Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

Textile Fabrics From Paper

By Frederick Grove-Palmer, London, England

Those of us who had any experience with civilian Europe during the later years of the war and immediately thereafter will be able to remember that there was a very considerable quantity of paper used for the manufacture of clothing material. In Great Britain there was little or no such material used but there was a large amount used on the European Continent, more especially in Germany and Austria.

For these fabrics they used a brown kraft paper. This kraft paper was not the only material used, however, as for some of the finer fabrics the manufacturers employed white papers. It was a somewhat striking feature of the matter that although there were very large outputs of these paper textiles in both Germany and Austria, which were quite commonly used by people of all classes when it became impossible to obtain wool and cotton in sufficient quantity, much of the available cotton being needed for the production of guncotton for ammunition, there was practically no improvement made in the design of the plant and machines used for making the textiles; indeed, if any were made at all, it was not in principle but only in detail.

In order that an idea may be gathered of the amount of paper that was required to supply the needs of the textile factories in Germany alone during the latter part of 1917 and during 1918, it can be stated that one hundred tons of paper daily, engaging over fifteen thousand people, was the quantity needed.

In order to counteract as far as possible the natural weakness in tensile cohesion of the paper fiber it is usually spun with a core of hemp or of jute which gives it somewhat greater powers of resistance but none of the efforts to overcome the sensitivity of the yarn to the action of moisture had any real success. When the cloth got wet it became exceedingly weak. The usual composition of the materials that were used in the manufacture of clothing was forty percent of paper yarn, forty percent of cotton yarn and twenty percent of a yarn from wool-paste or shoddy and examination of some of the suitings that were woven of this mixture proved that it looked rather unattractive. When the trade boom came soon after the war and the prices of all commodities were increasing rapidly there were offered on the market in Great Britain some suits of overalls for mechanics that at a distance appeared to be made of a kind of brown dungaree material. These were low in price and being brought in at a time when the cost of such suits was very high, there was some sale for them to people who did not trouble to examine the goods but bought only on price. This wearing apparel consisted almost entirely of dyed paper. As might have been expected their value for working men's clothes was so very slight that there was no second sale.

Yarns made from paper have been prepared in the United States both before and since the war and used in several different processes with good effect; if employed for purposes for which they are suited paper threads are good, but clothing does not happen to be one of these. Even if a different class of material were used, as is suggested later, for the manufacture of the yarn there is something about the idea of "Clothing oneself in old newspaper" that would prevent the sale on sentiment alone, although by using especially strengthened paper and weaving it alternately in pairs with worsted a really pleasing looking cloth can be made. One of the largest outlets for paper is for rope-making, more especially in the spinning of twine in which paper can be used to replace jute; this can be made up into very low grade quality rugs and carpets and also some classes of baggings. Another opening for the paper yarns is in the manufacture of openwork nettings that are employed as the groundwork for home-made wool rugs. Experience has shown that some of these nettings have very good wearing properties if treated with moderate care; there is a hearthrug belonging to the writer that has stood up to continuous wear since it was made some eight years ago and is only now beginning to show signs of weakening at the edges.

Paper Furniture

One of the really big uses of paper in the textile trade is for the making of furniture in shapes which look to some extent like basket or wicker work. For this purpose the 'thread', if one may so term it, consists of a very tough paper ribbon suitably twisted and wound round a metal wire with the result that it gives the practically unlimited strength of the wire combined with the natural softness and resilience of the paper. If the furniture made from this material is suitably enameled, it can stand considerable weather exposure.

Japanese Paper Textiles

As may be readily understood, a people who are so keenly interested in special papers as the Japanese would be adept in the production of fabrics from paper. Such is indeed the case, although the production is very limited, there being, so far as the writer has been able to discover only one small district in which paper cloth is manufactured. In Atami, a small town situated on the east coast, famous for its geysers and hot-springs, there is a very old established industry carried on in a number of tiny factories making the cloth known all over the country as "Gimpashi-ori," which when literally translated means: thin paper woven, and is a perfect description of the material. The warp is often a

very closely twisted paper thread and the weft is thin cotton, but this order is frequently reversed. There is a considerable number of excellent materials made from these threads in this thriving little town, which are disposed of as local mementos to the crowds of tourists and invalids who throng there to enjoy the beneficial effects of the hot baths. The writer bought several pieces of the cloth and found that it gave perfect satisfaction in use. Outstanding among these were two pillow covers: one was in its natural white state with a black and yellow dragon printed upon it, and the other was dyed a deep yellow with a black print of elaborate design. These were put into household use and for more than six years withstood the usual handling and other treatment, being laundered as occasion demanded and were finally discarded because the dragon print had become shabby, not because the material had worn out.

The paper that is used for making Gimpashi-ori is not the ordinary paper of commerce; it is made from a material that is found locally and is not readily obtained throughout the world. The paper in question is manufactured from mulberry wood and this is a waste product from the great Silk industry upon which Japan depends so largely for a large part of her commercial prosperity. When the leaves have been stripped off the mulberry trees in order to feed the silkworms the twigs are cut back in the following pruning season to make room for new growths to yield the crop of leaves for the silk harvest of the following year. Instead of burning the wood, the thrifty Japanese sell it to the paper maker who converts it into one of the toughest forms of paper known to man. Even the thinnest grades such as are used for the best quality writing-paper and books and for the manufacture of textile fabrics are practically untearable. It is much stronger than the more commonly used rice-paper.

Paper Yarn Making Process

The process used for the making of paper yarn may be briefly described. The paper is purchased in the form of a wide ribbon wound on reels from which it is wound on to bobbins while it is being mechanically cut to the required width. The bobbins containing the narrow ribbons are set up on a machine in which the ribbon is drawn across a damped felt roller which works in a bath containing a liquid that keeps it in a moist condition. From the felt the paper passes along between two parallel rolls and then through a ring which begins to give the edges of the ribbon an inward curvature. From here it runs on a carrier that produces a twist in it by letting it run on a horizontal ring which by its spinning completes the twist and curling. The twisted thread is wound on another bobbin. In such cases as when a jute or other form of core is to be introduced a flyer is attached to the machine by means of which the core travels forward as the paper ribbon is curled round it. It is necessary to exercise great care in the dampening operation. This is simple enough unless there is an unexpected hold-up of the machine, in which case there may be an excess of moisture at the spot where the ribbon rests upon the felt roller and a consequent reduction of tensile strength. A small attachment must be inserted so that in event of an accidental stoppage the paper ribbon will be lifted off the roller and held until the motion restarts.

There is another kind of paper spinning engine in which the ribbon is fitted into a flat circular box that has a lid in which there is a slot, and from this the paper is drawn so that when the box is rapidly rotated the ribbon is twisted into the form of a thread and rolled up on bobbins. A centre of wire or jute, if required can easily be put in while the strip of paper is being rolled around and the whole can be moistened by simply dipping the box into the bath b fore starting operations or if preferred there can be a felt roller pressed against the ribbon as it leaves the slot in the box-lid similarly to that used in the machine previously mentioned.

Increasing Tensile Strength of Paper

In all cases in which paper is used for textile purposes some efforts are made to enhance its tensile strength, and the usual method adopted for this purpose is to immerse the yarn as soon as it has been spun in a bath of some suitable liquid. There have been many researches made to discover the best chemical to use for this purpose and it has been found that some of the materials that are very efficient for waterproofing fabrics of silk, rayon and cotton are quite unsuited for waterproofing paper, but there seems to be no very definite reason why this should be the case. A process which has been found to answer fairly well and is being used is the so-called two-solution treatment. In the first stage the paper thread is run through a liquid containing tannin, glue and silicate of soda dissolved in water at a temperature of between 110 and 120 deg. F., from which it is drawn without giving it time to dry into a cold bath made up by dissolving the basic formate of Aluminium in water until the specific gravity of the liquid is 1.04. The yarn is then dried.

This treatment is quite effective as it increases the tensile strength of the dry paper by at least ten per cent while the wet strength will be found to increase by about thirty per cent.

The method of making up Bath No. 1 requires a little care: three-quarters of a pound of good quality glue is soaked in cold water overnight and then warmed up until it is entirely dissolved. In another vessel a quarter of an ounce of tannic acid is dissolved in a little hot water and a quarter of an ounce of sodium silicate having a specific gravity of 1.31 is slowly added and thoroughly mixed. The solution of glue is warmed up to 110 deg. F. and the tannin-silicate solution is poured in little by little, with constant stirring, every precaution being taken to avoid the production of a precipitate. Water is added to bring the quantity of liquid up to one gallon.

There is another method of adding to the resistant powers of paper that is being made especially for use in the textile industry, and that is to treat it while in the pulp stage with a very weak solution of one of the colour lakes dissolved in benzine. There should not be enough of the color to have any tinctorial effect upon the bulk of the paper, but although the chemical reason is not fully understood, it has been found that the resulting product is less liable to be weakened by the action of either water or dilute acids.

Dyeing Paper Fabrics

The process of dyeing paper fabrics does not differ very greatly from that usually adopted for dyeing cotton goods and the same remarks apply to the printing of colored designs. It must, however be remembered that the paper is weaker in the wet state and therefore at every stage extreme care needs to be taken to avoid damaging the material. In dyeing cotton fabrics it is not unusual to let them run through the machines in the form of a rope. This method is not adaptable to dyeing paper. The material must be kept quite flat and free from any strains either with or across the sheet. It is necessary also that the dyebaths should be kept as free from alkalinity as possible as this has a deleterious action upon the fiber of the paper yarn. For a similar reason the temperature of the dyebaths and the subsequent washing waters should not be permitted to rise above 130 deg. F. inasmuch as higher temperatures have a tendency to cause the fiber to open up with consequent weakening. Every effort must be made to conserve the strength of the paper. Sometimes the finished fabrics are rather unpleasantly harsh to the touch. A good method for improving this condition is to immerse them in a weakly alkaline soap bath and dry them by means of the calender. The soap used should be made from neutral oils, and a small trace of bicarbonate of soda added to give it a slightly alkaline reaction.

Cleaning of Paper Textiles

The cleaning of textile fabrics made from paper yarn is a subject that calls for considerable judgment and care in handling, for the usual laundry method of throwing the lot into a boiler full of strong alkaline water and boiling it up, can only end in disaster. The first step is to submit the material to the action of a vacuum cleaner in order to rid it of any loose dust that it may have picked

up, accompanying the suction by a gentle beating which will assist in freeing the accumulations from the fiber. The material is then treated with a warm soap solution and slowly wafted backward and forward in the bath so that the swaying motion will have the effect of washing out the dirt. Heavy friction must be most carefully avoided. Following this the article may be passed through a warm but dilute solution of bleaching powder of favelle water. This may be repeated several times but in no case should there be any delay; the work must be done as rapidly as possible, for a prolonged action of even very weak bleach on the paper will cause a great weakening if not actual destruction. Because the laundering will have given rise to an opening up of the fiber it is requisite that the normal texture of the fabric should be restored as nearly as possible before it is returned. The usual method adopted for this is to pass the cloth through a mangle, running the lower roller in a solution of about one per cent of gelatine-glue to which is added a trace of glycol. This has the effect of closing the pores and the material may then be finished using the ordinary mechanical method of drying, hot-pressing and calendering.

If paper textiles are artistically decorated they can fit in the scheme of decorations where price is a matter of great importance and a great measure of popularity may be looked for in such uses. It is obviously true that if an attempt is made to produce paper fabrics that are to withstand any hard wear, such an attempt is not likely to be successful at the present stage of knowledge of the means of treating of the fiber.

Handling of 100 Per Cent Sulphite Sheet on Paper Machine

SPECIAL INQUIRY No. 97

A member inquires regarding the action of the presses of a fourdrinier machine of the news print type with suction couch and two suction presses on a *soft, free,* 100 *per cent* 32 *pound sulphite sheet.*

He is particularly interested in the following points:

1. Will the sheet run safely with few breaks between the suction couch and the first felt?
2. Will the sheet stick badly to the top rolls? Can it be made to run safely at these points? How?
3. What type of top press rolls are most suitable? (Wood, granite, gunmetal, etc.)
4. About what moisture content can be hoped for after the presses, running at 700 feet per minute?

Responses to this inquiry, in blank, will be combined in a special report which will be distributed to all who contribute to it. Send replies to

Secretary, TAPPI,
18 East 41st Street, New York.

The A B C of Hydrogen Ion Control

The LaMotte Chemical Products Company, of Baltimore, Md., have just published the Fourth Edition of "The A B C of Hydrogen Ion Control," a discussion of the meaning of hydrogen ion concentration and pH values in simple language by W. A. Taylor, Ph.D., chemical director of the company.

The theory, methods of operation and a number of specific applications are, as heretofore, given to considerable detail, and in such simple phraseology that they are entirely clear to the non-technical as well as the technical man. In the section on "Applications" the reader will find definite recommendations covering various operations and process control work. By referring to the subjects outlined there he will undoubtedly find actual data pertaining to his specific needs, or sufficient data bearing upon an allied subject which will enable him to get a good idea of the value of the LaMotte service to his field.

Old Papers and Their Recovery

SPECIAL INQUIRY No. 96

A member wishes to obtain some data regarding the processes and equipment used for recovering old papers for use in the manufacture of white papers.

The process using the rotary boiler has many points in its favor. It is desired to know if any member is acquainted with any process that is more economical considering the following factors:

1. Cost of installation.
2. Cost of labor.
3. Power: amount and cost.
4. Heat: amount and cost.
5. Use of chemicals: amount and cost.
6. Use of bleach: amount and cost.
7. Yield: tons of waste paper handled per day (24 hours), tons of recovered stock per day (24 hours).
8. Per cent shrinkage of paper shredded.

Information is also desired concerning the best equipment to use for each part of the process. This data should be accompanied by a layout and sketch of the equipment and should include data about the shredder, digester (continuous or batch, open or closed tanks), washing equipment.

This inquiry will be handled under the Service to Members plan and a transcript of the replies, in blank, will be sent to all members who respond with information.

Secretary, TAPPI,
18 East 41st Street, New York.

Paper Machine Drives and Rosin Size

THEORIE DES ANTRIEBS UND KRAFTBEDARFS VON PAPIERMASCHINEN. H. Rappold. Theorie der Harzleimung. E. Oman. Schriften des Vereins der Zellstoff- und Papier-Chemiker und -Ingenieure, Band 18. Berlin, Otto Elsner Verlagsgesellschaft M. B. H. 1927. 71 p. Price, 4 RM.

This book is composed of two distinct parts. Pages 5-29 is a mathematical discussion by H. Rappold of the theory of the drive and the power requirements of the paper machine, which is reprinted from *Der Papierfabrikant*, Nos. 28-29, 32, 34, 37-38, for 1926. Formulas are given for the calculation of the power requirements of the various parts of the machine as well as a typical example of their application.

The second part, pages 31-71, is an extensive treatise on the theory of rosin sizing by Erik Oman, of the Technical High School of Stockholm, reprinted also from *Der Papierfabrikant*, Nos. 11, 14-15, 20-21, 26, 28, 31-32, 33-35, for 1927. The subject is discussed under the following topics: Historical development of rosin sizing; preparation of size and alum solution; precipitation of resin with alum; action of aluminium sulphate upon sulphite pulp; action of manufacturing water upon the size; action of rosin size upon sulphite pulp; contents of substances in sulphite pulp harmful to sizing; the role of aluminium in sizing; electroendosmotic experiments on sulphite pulp; the action of dilute acids and alkalies upon sulphite pulp; sizing in the beater. The work closes with a chronological bibliography on sizing and with a list of German patents on sizing methods. C. J. West.

Annual TAPPI Banquet Plans

On the evening of Washington's Birthday the Technical Association will hold its Thirteenth Annual Banquet in the West Ball Room of the Hotel Commodore in New York.

The program for this affair is rapidly reaching completion and is of such a nature that no papermaker visiting New York during Pulp and Paper Week will care to miss it.

The speakers will include Dr. Edward R. Weidlein, Director of the Mellon Institute of Industrial Research and President of the American Institute of Chemical Engineers, and Dr. Hollis Godfrey, President of the Engineering-Economics Foundation of Boston.

If the entertainment features could be announced it would be difficult to make seating arrangements in the West Ball Room to accommodate the many who would desire to attend.

New Pulp Sampling Borers*

By Sidney D. Wells [1]

The sampling of paper pulp by the purchaser at the point of receipt presents quite a problem if sufficient samples are taken to obtain reliable results. In recent years the tendency toward the use of hydraulic presses and grooved press rolls working under enormous pressures has made the task more difficult. Kraft pulp that has been partly dried on drying machines presents a particularly difficult problem.

The usual radial sheet cutters (Fig. 1) were found not adapted to sampling pulp of this nature and the manufacturer of the tool was appealed to to furnish something that would accomplish the purpose with less labor. It was felt that a tool with point having a spiral thread ten or twelve threads to the inch might work better in that the thread would catch hold of the pulp and pull the tool in. With the old tool it was necessary to force the tool in by pressure against the brace and in sampling bales in warehouses and freight cars and similar places in all kinds of positions it was often inconvenient to do so.

The tool manufacturer furnished a tool with point having twelve threads to the inch (Fig. 2). This tool was tried on extra strong imported kraft pulp of the character referred to above and it was found that the labor of boring to obtain the necessary samples was greatly reduced. The thread on the point pulled the tool into the bale so that it was not necessary to exert any pressure on the brace and it was found possible to use a bridge builder's brace (Fig. 3) having two handles whereby both hands could be used in turning the tool. The use of both hands reduced the labor of sampling very much and also reduced the time necessary for the work. It was found, however, for this class of pulp that twelve threads to the inch was too coarse in that it tended to draw the tool into the bale faster than the knife edge could cut the discs. A second tool (Fig. 4) was made having sixteen threads to the inch which was found excellent for the work.

The first tool having twelve threads to the inch was found very effective, however, in sampling sulphite pulp in sheets on rolls 80 per cent dry or above. Wet sulphite rolls or laps containing more than 20 per cent of moisture may be sampled very easily with the original tool having a twisted point.

A third tool was made with point having eight threads to the inch and used in softer pulps. It was found, however, that this tool was no better on soft pulps than the original tool with the twisted point. The latter tool, however, cannot be used with the bridge builder's brace and the more common type of brace is necessary. A brace such as is used by wagon makers (Fig. 5) having the radius of the handle eight or nine inches will be found to be most satisfactory for the purpose.

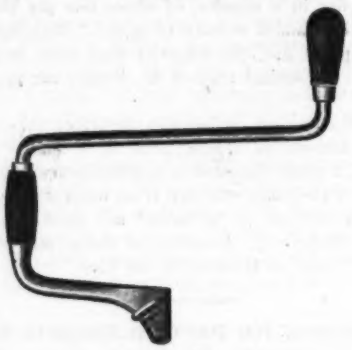


FIG. 3

Recently, shredded sheet pulp put up in bales is commonly encountered. The auger type of sampling tool is not satisfactory for

* Paper Mill Laboratories, Quincy, Ill
[1] Member TAPPI.

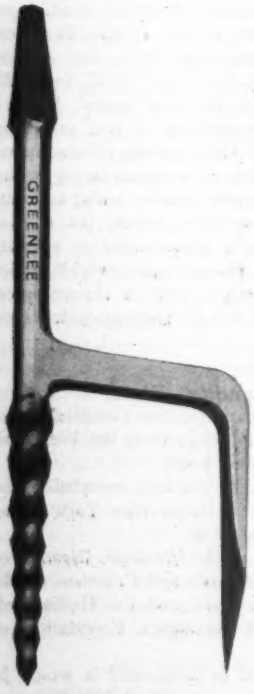


FIG. 1

FIG. 2

FIG. 4

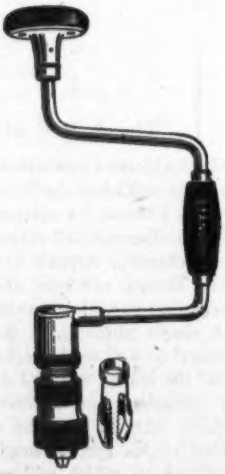


FIG. 5

this type of material and the only tool known to the writer that will give accurate samples with a reasonable amount of labor is the Crossley sampling tool.

Summary

Pulp auger sampling tools with their points fitted with a typical wood screw thread are found more satisfactory for sampling pulp in sheets when the moisture content is 30 per cent or less.

For hard pressed strong kraft sheets 80 per cent dry or above the pitch of the threads on the point of the tool should be sixteen threads to the inch.

For hard pressed sulphite pulp in sheets 80 per cent dry or above the pitch of the threads on the point should be twelve threads to the inch.

For unpressed damp sheets below 80 per cent dry or laps the tool with the twisted point is satisfactory.

The shanks of all pulp augers should be sufficiently sturdy to withstand without bending the severe strains encountered.

It is advisable for pulp samplers to provide themselves with a complete set of tools so that each type of pulp may be sampled with the tool best adapted for the purpose.

Acknowledgments are due to the Greenlee Bros. & Co., Rockford, Ill., for furnishing the tools used in this work and cooperating in every way to make tools that were satisfactory. They also furnished the photographs used in the illustrations of the boring tools. The plates and drawing used to illustrate the braces used were kindly furnished by the Stanley Rule and Level Plant, New Britain, Conn.

I wish to also acknowledge the assistance of Henry B. Weis, of Quincy, Ill., in sampling the various types of pulp worked upon in this investigation.

International Pulp Co. Elects Directors

GOUVERNEUR, N. Y., January 23, 1928.—The annual meeting of stockholders of the International Pulp Company was held at the office of the company in this village and the following directors were elected for the coming year: Michael Doyle and Kendall B. Castle, Rochester; M. N. Belding, W. B. Pollock, William H. Stilhamer, Stephen J. McCrimlisk, New York City; William C. Greer, Frank P. McCarthy, Troy, and Frederick N. Belding, of Rockville, Conn.

The board of directors will meet at the New York offices of the corporation for the election of officers. The present officers of the corporation are Michael Doyle, president; William C. Greer, vice president; M. N. Belding, treasurer, and Stephen J. McCrimlisk, secretary.

New Automatic Grinder

Samuel G. Rogers & Co., Buffalo, N. Y., announce an addition to their line of automatic knife grinders and saw sharpeners in the new Type "R" sectional wheel knife grinder. This machine is especially designed for grinding barker, chipper and paper knives. This machine is equipped with a new 14 inch sectional grinding steel chuck with simple adjustment for holding and replacing segments. The sectional grinding wheel permits much faster knife grinding than the solid wheel type because the spaces between the grinding sections form channels for carrying away the abrasive particles also the stock ground off the knife, and allows free entrance of the coolant to the actual grinding contact, which both

SECTIONAL WHEEL KNIFE GRINDER

carries away the heat generated and aids in washing away the refuse. In addition there is economy of abrasive as the sections can be replaced cheaper than solid wheels. All sizes are equipped with an improved water attachment, and heavy yoke adjustable bottom supports to eliminate vibration, double rachet feeding with automatic stop, increased speed; ball bearing if desired; direct motor drive which includes built in standard 5 hp., 60 cycle motor with starter, extended shaft, brackets, etc.; belt drive with tight and loose pulleys 8 inches in diameter with 3½ inch face to run 1,150 r.p.m.; leather belts, emery wheel dresser, wrenches, etc. This new Type R machine will be made in eight different sizes, 76, 84, 90, 96, 108, 120, 130 and 144 inches.

United States Patents on Paper Making

Issued During December, 1927

Compiled by Clarence J. West

1,651,388. Wood substitute. Harold C. Harvey and Hubert L. Becher, assignors to The Agasote Millboard Company, Ewing Township, N. J. Dec. 6, 1927. (Cl. 92—21).

1,651,407. Process of and machine for making fiber tubes. Howard Parker, assignor to Brown Company, Berlin, N. H. Dec. 6, 1927. (Cl. 92—66).

1,651,530. Method of bleaching paper pulp. Otto Kress, assignor to American Lakes Paper Company, Chicago, Ill. Dec. 6, 1927. (Cl. 8—2).

1,651,627. Machine for making envelopes. Frederick James Parks, Cleveland, Ohio. Dec. 6, 1927. (Cl. 91—49).

1,651,665. Manufacture of pulp and paper. Linn Bradley and Edward P. McKeefr, Montclair, N. J., and New York City. Dec. 6, 1927. (Cl. 92—13).

1,651,848. Paper box and blank. Charles E. Stevens, San Rafael, Calif. Dec. 6, 1927. (Cl. 229—31).

1,651,877. Pasteboard box making machine. Arthur J. Evers, assignor to Self Locking Machine Company, Chicago, Ill. Dec. 6, 1927. (Cl. 93—36).

1,651,951. Plaster board. Hans E. Hanson, Minneapolis, Minn. Dec. 6, 1927. (Cl. 72—31).

1,652,042. Safety paper. John Wallace Neff, Easton, Pa. Dec. 6, 1927. (Cl. 283—9).

1,652,044. Apparatus for feeding mechanical grinding machines for producing wood pulp. George Nenzel, Herischdorf, Germany. Dec. 6, 1927. (Cl. 83—75).

1,652,720. Apparatus for hydrating fibrous pulp for the manufacture of paper and cellulose therefrom. Harold Jackson, Garstang, England. Dec. 13, 1927. (Cl. 92—20).

1,652,725. Process for the recovery of sodium compounds from waste sulphite liquors. Charles H. Milligan, Wyoming, Ohio. Dec. 13, 1927. (Cl. 23—129).

1,652,861. Sealing device. Charles H. Howard, assignor to American Re-enforced Paper Company, Attleboro, Mass.

1,653,007. Apparatus for producing seamless fibrous containers. Richard E. Hall, assignor to The Arvey Manufacturing Co., Wilmington, Del. Dec. 20, 1927. (Cl. 92—56).

1,653,124. Interrelated pulp refining and viscose process. George A. Richter, assignor to Brown Company, Berlin, N. H. Dec. 20, 1927. (Cl. 260—10).

1,653,125. Method of and mechanism for testing pulp suspensions. Milton O. Schur, assignor to Brown Company, Berlin, N. H. Dec. 20, 1927. (Cl. 92—46).

1,653,138. Process for the manufacture of a textile material from vegetable raw material. Johannes Clazinus Marie van Diggelen, assignor to Naamlooz Vennootschap : Octrooi Maatschappij "Vede," Amsterdam, Netherlands. Dec. 20, 1927. (Cl. 92—10).

1,653,307. Method of charging pulp digesters. Elis Olsson, West Point, Va. Dec. 20, 1927. (Cl. 92—7).

1,653,416. Method and apparatus for treating fiber. August F. Richter and Frank A. Augsbury, assignors to Stebbins Engineering and Manufacturing Company, Watertown, N. Y. Dec. 20, 1927. (Cl. 92—11).

1,653,610. Paper wetting machine. Peter Aitchison, assignor to American Bank Note Company, New York, N. Y. Dec. 27, 1927. (Cl. 91—46).

1,653,730. Manufacture of chemical wood pulp. Armin Peetz, Alfeld, Germany. Dec. 27, 1927. (Cl. 92—11).

1,653,817. Breast roll for paper machines and the like. William H. Millspaugh, assignor to The Paper and Textile Machinery Co., Sandusky, Ohio. Dec. 27, 1927. (Cl. 92—44).

1,653,908. Paper napkin machine. John U. Hunt, assignor to Hunt's Modern Paper Products, Inc., New York, N. Y. Dec. 27, 1927. (Cl. 93—93).

Paper Research of United States Bureau of Standards During 1927.*

By B. W. Scribner, Chief, Paper Section

It is the custom to publish a yearly report similar to the present one, summarizing the work of the paper section of the United States Bureau of Standards. Most of the subject matter has previously been given more or less general publicity through the medium of newspaper items, the bureau's monthly, (Technical News Bulletin,) and reports of a more extensive nature published in trade journals and in the regular scientific and technologic papers of the bureau. However, in addition, a summary is considered desirable, as it shows in a connected way the general trend of the work. It also brings together in one publication brief reports of the various researches. This is desirable for the information of those interested who may not have been informed of them through the publicity channels mentioned.

For those desiring more detailed information on the researches mentioned, all bureau publications relating to them are listed. If the results of a research have not been published, the bureau will be pleased to record the name of anyone interested, for the purpose of informing him when a publication is available. Bureau papers can be secured from the Superintendent of Documents, Government Printing Office, Washington, D. C. A limited number of reprints of articles published in trade journals are received and copies are furnished by the bureau without charge, as long as the supply lasts. General information on the bureau's functions and activities is given in detail in "Circular of the Bureau of Standards, No. 1." (Government Printing Office, 1925, Price 50 cents.)

I. Technical Standardization of Paper

1. Testing Methods.

a. Measurement of Degree of Sizing.

Since the first description of the curl sizing tester developed by the bureau was published (Paper Trade Journal 79, No. 10, 48-50, Sept. 4, 1924), additional study of this instrument has led to several modifications which have improved its performance considerably. To measure the degree of sizing the curl tester makes use of the rate of curling of the paper, which in turn depends upon the rate of wetting of the paper. A description of the perfected instrument (now available commercially) and the principle upon which it depends, together with some of its more important applications, was published in Paper Industry, 9, No. 2, 259-260, May, 1927 (The Curl Sizing Tester, F. T. Carson).

b. A Wet-Rub Tester.

A description of the instrument developed for determining the resistance of currency paper to surface abrasion was published in Paper Trade Journal, 84, No. 2, 45-46, Jan. 13, 1927 (A Wet-Rub Tester for Paper, F. T. Carson and F. V. Worthington).The apparatus consists of (a) a means of clamping the specimen over a hard, smooth surface, (b) a power driven rubber friction surface or mechanical finger maintained under constant pressure, (c) a means of keeping the surface of the paper wet while being tested, (d) an automatic counter to record the number of "double rubs" required to wear a hole through the paper, (e) an electric contact device which stops the tester as soon as a hole is worn through the paper. A test of this nature is considered of value for most surface sized papers, such as blue print, map and ledger paper.

c. Bursting Strength.

The effect of the clamping device of the Mullen paper tester on test results has been studied and the information published in Paper Trade Journal, 85, No. 5, 55-57, Aug. 4, 1927, (A Study of the Mullen Paper Tester, L. W. Snyder). In this tester the specimen is clamped over a circular aperture and hydrostatic pressure is applied to the speciment through a rubber diaphragm until the paper breaks. Data are given showing that a variable error in test results obtained with the Mullen paper tester is caused by the rubber washer gripping the surface of the clamp which holds the paper in position for test. The error is apparently due to new rubber washers permitting considerable slippage of the paper under test, the paper being more firmly held as the washers harden with age. Elimination of this form of gripping surface is desirable. To find the effect of such elimination, different types of all-metal clamps were studied. A smoot-surface metal clamp was found to give good results. It held the paper more firmly than the rubber-washer type of clamp and has the advantage of remaining constant over a long period.

A study of the Cady "Electric" bursting strength tester showed it to have several mechanical advantages in respect to ease of operation and rapidity of testing. As in the case of the Mullen tester, however, variable errors in test results occur, apparently caused by slippage of the paper under test.

A new form of bursting strength tester, the Thwing "Impact" tester, was experimentally studied. The test in this case is accomplished by allowing a freely moving plunger to fall under its own weight against a sample of paper rigidly clamped over a circular orifice. The instrument studied was suitable for testing boards only. It was found to give less variable test results than the Mullen tester. For readings on the latter from 100 to 300 points and approximate relation. Thwing Impact Tester=0.156 Mullen Tester, holds within about 15 per cent of the observed values.

d. Copper Number of Paper.

The copper number of paper is determined for the purpose of indicating the probable resistance of the paper to deterioration and of controlling manufacturing processes so as to obtain a product of satisfactory permanency. It is a generally recognized measure of the amount of impure forms of cellulose present which tend to weaken the paper and induce deterioration of the fiber.

Determination of the copper number of high-grade rag-fiber bond papers is difficult owing to the resistance which these hard, tough papers offer to the usual procedure employed for this determination. A modified method is described in a bureau publication (Technologic Paper No. 354, A Modified Method for the Determination of the Copper Number of Paper, B. W. Scribner and W. R. Brode), by which greater accuracy in testing such papers was obtained and which is recommended in part at least for general use in testing paper or pulp. It is patterned after the method of Gault and Mukerji and that of Staud and Gray. The variation from these methods considered of prime importance is the grinding of the test specimens to a finely divided condition. A grinder devised especially for the purpose is described in detail.

e. Fiber Determination of Roofing Felts.

Because "saturating" felts are usually made of such a variety of kinds and sizes of fibers, it is difficult to make an accurate determination of the fiber composition. In connection with research being carried on at the Bureau of Standards on the life and serviceability of "saturating" felts, an opportunity was afforded for studying this problem. The study was made on six felts of varying fiber composition made in the bureau's paper mill. The fibrous materials used included cotton rags, gunny bagging, old mixed papers, and sawdust. In making the fiber analysis, the

* Publication approved by the Director of the Bureau of Standards of the United States Department of Commerce.

official method of the Technical Association of the Pulp and Paper Industry was followed as closely as it was practical to do so. Fiber determinations were made by the "dot-count" method, which was suggested to the Bureau of Standards three or four years ago. This method appears to minimize the errors due to estimating the lengths and sizes of the fibers. A round microscope cover glass having a small dot at the center was placed on the diaphragm of the eyepiece of the microscope. The prepared slide containing the fibers was then moved across the field of view, and each fiber, or part of a fiber, passing directly under the dot was counted. Some of the longer fibers passed under the dot more than once, but were counted each time. It was found necessary because of the presence of coarse fibers and fiber masses in the felts, to use a mechanical stirrer in preparing the fibers for examination. The results of different analysts agreed very closely, and indicate that a comparatively inexperienced analyst can, by use of the dot-count method, arrive at as nearly correct determination of the fiber composition as could be arrived at by calculations based upon the mill weights of the different constituents. (Determination of the Fiber Composition of Roofing Felts, R. E. Lofton, Paper Trade Journal 84, No. 18, 57-57, April 7, 1927). As the results obtained by the bureau were corroborated in an investigation made by the American Society for Testing Materials, they have adopted the dot method as a tentative standard procedure for analysis of roofing felts.

f. Tearing Resistance.

Growing out of the demands of a particular investigation (comparison of the properties of different roofing felts) a means was developed of increasing the capacity of the Elmendorf tearing tester, since no tearing tester of sufficient capacity was commercially available. It was desirable to double the capacity of the tester available, and to do it in such a manner as to permit the use of the same scale and to necessitate as little change as possible in the present instrument. In order to secure the necessary data for the altered design it was first necessary to derive an adequate calibration formula for the tester. The derivation and use of this formula are given in some detail since the literature does not afford an adequate means of calibrating the scale on the instrument. A simple procedure for periodic adjustments is also given. By means of a formula analogous to the one derived, an auxiliary weight was designed which can be quickly attached to or removed from the tester and which just doubles the values of the scale readings without necessitating any other alteration in the instrument. A publication on this subject is in preparation.

g. Folding Endurance.

The Schopper folding tester, which is designed to test the bending endurance of paper and its resistance to such types of wear as involve creasing and folding, is so constructed that a number of mechanical variables are introduced by reason of the several rollers and other working parts which are driven by the specimen being tested. These mechanical variables affect the folding results in much the same manner as do errors in adjusting the tension applied to the specimen during the test, and apparently can in general be expressed as equivalent effective tension. The tension on the specimen is very critical, the effect on the folding results being inversely proportional to something like the tenth power of the tension, according to available data. Owing to the necessity of frequent confirmation of the amount of applied tension, devices have been developed for facilitating the adjustment. A new device is described in a bureau publication (Technologic Paper No. 357, Calibration and Adjustment of the Schopper Folding Tester, F. T. Carson and L. W. Snyder) which permits calibration and adjustment of the spring without disturbing the assembly of the tester. This is a balanced bell-crank lever supported by a knife-edge in such manner that the springs may be calibrated against dead weight with a minimum of inconvenience. A method is outlined for measuring the friction of the rollers and an effort is made to emphasize the magnitude of this influence upon the folding results.

h. Official Paper Testing Methods of the Technical Association.

The Technical Association of the Pulp and Paper Industry is actively continuing its formulation and adoption of official association paper testing methods. This work continues under the direction of a member of the Bureau of Standards staff who acts as chairman of the formulating body, the association's Paper Testing Committee. The following 15 additional methods have been officially adopted by the association during the past year: machine direction, ream weight, thickness, tearing strength, folding endurance; quantitative determination of active sulphur, moisture, ash, starch; qualitative determination of casein, rosin, nitrogenous matter, starch; analysis of mineral coating and analysis of mineral filler.

Additional work of the committee, still in progress, is the revision of the association publication, Paper Testing Methods. A new edition was necessitated by the exhaustion of the present edition, there being considerable demand for this handbook of paper testing technic. A thorough revision was necessitated by the many new developments in testing practice since the last edition was printed.

2. Specifications.

a. Windows of Window Envelopes.

The results of an investigation of window envelopes, made for the purpose of developing standard specifications for the windows, were reported in Technologic Paper No. 343, by R. E. Lofton. The extensive use of window envelopes is a matter of considerable importance to postal officials and employees, because the use of envelop windows of poor transparency and high gloss would result in severe eye-strain among the employees and loss of time in distributing the mails. There are two types of windows. The window of the "two-piece" envelope is made by cutting a panel out of the body of the envelope and pasting over it a transparent material, glassine paper being commonly employed for this purpose. The window of the other type, the "one-piece" envelope, is made by impregnating the window portion of the envelope itself with a suitable oil or varnish. With the cooperation of manufacturers, representative samples of practically all domestic window envelopes were secured and the windows were tested for opacity and gloss. The opacity was determined by means of an apparatus devised by the bureau. The gloss of the windows was measured with the instrument commonly used in the paper industry for the purpose, the "Glarimeter." Based on these and other test data secured, specifications defining windows considered satisfactory were formulated for both types.

b. Fiber Wall Board.

The research in cooperation with fiber wall board manufacturers, made for the purpose of developing a Federal Specification for this material, was completed and a proposed specification formulated. This covers both types of boards—the laminated and the homogeneous. The chief information developed is that the immersion water absorption test commonly made to determine the probable degree of resistance of the board to expansion is not adequate. Neither the amount of moisture absorbed by boards upon immersion in water nor that absorbed upon exposure to saturated water vapor has any consistent relation to the actual expansion of the boards when they are subjected to a moist atmosphere. It is recommended that an actual expansion test be made by first exposing the board for 72 hours to an atmosphere of 30 per cent relative humidity, then exposing it an equal length of time to saturated water vapor and measuring the resulting expansion. An extensometer was devised which simplifies this measurement. A flexural strength test is recommended, which consists of suspending a test strip on two parallel rods and applying an increasing load at the center of the strip until it breaks. In addition to requirements respecting the above properties, thickness and weight limits are suggested.

c. Wrapping Fatty Meats.

At the request of a meat packing concern some study was made of the wrapping practice employed for fatty meat products such

as hams and bacons. The common practice is to use three wrappers. A grease-resistant paper is used next to the meat. A coarse, absorbent paper known as rag ham paper is applied next, the purpose of this being to absorb and retain grease that may work through the inner wrapper. The outer wrapper is also a grease-resistant paper. Tests of papers used by different packers showed there was considerable variation in the grease-resistance of the inner wrapper. A test in line with service conditions was made by stacking the three wrappings in the same order as they are applied to the meat with the inner wrapping paper on top, cementing a glass cylinder to the upper surface of this paper, placing some lard in the cylinder and keeping the whole at a temperature of 115 degrees F., which was above the melting point of the lard. It was found when the inner wrapper was a good commercial grade of grease-resistant paper that what little lard exuded through it was readily retained by the rag ham paper. These test results indicate that if a good quality of grease-resistant paper is used next to the meat, the outside grease-resistant wrapper could possibly be replaced by an ordinary inexpensive wrapping paper with an appreciable saving in wrapping costs.

d. Player-Piano Music Rolls.

Trouble was experienced with certain music rolls due to incorrect register caused by expansion of the paper across the rolls when they were used in humid climates. Tests of the paper showed that it had an unusually high degree of expansion and that the expansion was excessively high in the cross direction of the roll as compared with that in the opposite direction. Tensile and folding strength tests of the paper showed much the same variation in the two directions, that is the strength in the cross direction was only a small proportion of that in the other direction of the paper. The strength tests showed that the paper was unevenly formed, too many fibers lying parallel to the long direction of the roll and as expansion of paper is caused largely by the envelope windows of poor transparency and high gloss would result in swelling of the fibers upon absorbing moisture, this uneven formation apparently was responsible for the excessive expansion across the roll. It was recommended that care be taken to secure as uniform fiber formation as possible on the paper machine so as to lessen the cross expansion of the paper, and to use a softer type of paper if possible as softness tends to decrease expansion.

e. Classification of Paper Freight-Container Bags.

The improvement in the quality of paper bags and the development of the multiple-wall type have led during recent years to a continually increasing use of such containers for shipping powdered materials by freight. This has directed considerable attention to the requirements for them contained in the Consolidated Freight Classification. The Bureau of Standards, at the request of a paper bag manufacturer and in cooperation with him, made a a series of tests respecting the relative strength of single-wall bags. and double-wall bags. This was in respect to Section 10, Rule 40, of the Consolidated Freight Classification, which requires that a multiple-wall bag shall contain a greater total weight of paper than a single wall bag, when the two types of bags are used for a similar purpose. Two sets of satchel-bottom, pasted, kraft bags were used in making the comparison. A ⅛-bbl. bag made of a single layer of 100-pound paper was compared for strength with a ⅛-bbl. bag composed of two sheets of 50-pound kraft paper. A similar comparison was made between a ¼-bbl bag made of two layers of 60-lb paper and a ¼-bbl. bag made of one sheet of 120-pound paper. The test adopted was the repeated dropping of the bag filled with 25 or 50 pounds of flour, according to its capacity, until it broke. The apparatus used for dropping the bag was a double trap door of adjustable height. The bursting strength and weight of the paper composing the bags were determined and taken into account in comparing the results obtained. When subjected to the dropping test, which is generally considered to best simulate the service strains to which bags are subjected, the double wall bags showed from 18 per cent to 100 per cent greater resistance to the dropping impact than the single-wall bags. The tests show conclusively that double-wall bags are stronger than single-wall bags when the two are of the same type and contain the same weight of paper. A report giving these findings was submitted to the Consolidated Freight Classification Committee relative to proposed revision of the section of the Consolidated Freight Classification mentioned. The revised section would permit equal weights of paper for single-wall and double-wall bags.

f. Sheathing Paper.

The bureau is making a study of sheathing paper for the purpose of assisting in the formulation of specifications of quality for this important building material. Obviously, as the function of sheathing paper is to act as a barrier to passage of air, the main requirements are high density of the material for resistance to air, sufficient strength to withstand the handling incident to securing the paper in place, and a sufficient degree of water resistance to prevent impairment of its strength through absorption of water while being placed in position. Adequate methods for testing strength and water resistance are available, but determination of the most suitable method for measuring the air resistance is necessary. Various air-resistance test methods are being compared experimentally by application of them to representative kinds of sheathing papers to find the most suitable method. This is a cooperative research with the National Lumber Manufacturers Association, it being made at their request.

g. Printing Quality of News Print Paper.

Newspaper publishers are experiencing considerable trouble with the defacement of printing due to the printed characters showing through the paper. In cooperation with the American Newspaper Publishers Association some study is being made of this problem. In many cases investigated, lack of opacity of the paper was found to account for poor printing results, the showing through of the ink being in inverse proportion to the opacity of the paper. It is known, however, that there are many other contributing causes such as the formation and constituents of the paper on the one hand and the viscosity and the chemical composition of the ink on the other hand. It is possible that considerable modification of one or both of these raw materials of the publisher is desirable.

II. Standardization of Paper-Making Materials and Processes

a. Caroá Fiber.

A complete report of both the laboratory and semi-commercial paper-making tests of Caroá fiber completed in the previous year was published in the bureau of Technologic Paper No. 340 (Caroá Fiber as a Paper-Making Material, M. B. Shaw and G. W. Bicking.) In addition to data showing that this material compares favorably with rag or rope fiber for making paper, a complete description of both the laboratory and semi-commercial methods and equipment used for making tests of this nature is given. The equipment is illustrated by photographs. The results obtained in a semi-commercial way showed excellent agreeement with those obtained by the laboratory tests. It has been the general experience of the bureau that the paper-making quality of a fibrous raw material, can be predicted quite accurately from the results of small-scale laboratory test methods such as those described.

b. Manila Rope Waste for Paper Manufacture.

Paper-making tests were made to determine the suitability of manila rope waste for paper manufacture. The waste employed in the experimental work was refuse fiber from the manufacture of manila cordage at the rope walk of the Boston Navy Yard. At present, little, if any, of the waste derived from manila hemp at cordage mills is used commercially, most of its being burned under the boilers as fuel. The experimental tests were made with a view to finding a profitable use for the refuse fiber of the cordage industry. Manila hemp (Musa textilis) is obtained from the leaf stalks of a plant of the banana family and is one of the principal products of the Philippine Islands. The fiber is tough and strong and is used primarily for textiles and cordage. The material used in the paper industry is obtained almost entirely in the form of old rope and the papers produced from it are commonly called "rope" papers. Rope papers are characterized by

great strength, toughness, and wearing qualities, and are ordinarily used for shipping tags, wrappers, bagging, etc., in which strength is essential. The pulping and paper-making operations employed in the experimental tests on the waste were those commonly used in paper manufacture. Soda ash was the digesting agent that gave best results. Tests on kraft and sulphite wood pulps and on old rope stock were included for comparison. A good yield of paper-making fiber was obtained from the waste and the paper produced was of sufficient strength for a variety of uses. Measurements on the finished paper indicate that manila rope waste does not compare favorably with old rope stock but is considerably better than sulphite wood pulp.

A complete report of this work was published in PAPER TRADE JOURNAL, 84, No. 18, 68-70, May 5, 1927 (Manila Rope Waste for Paper manufacture, M. B. Shaw and G. W. Bicking).

WASTE MAIL POUCHES FOR PAPER MAKING.

An investigation was made to determine the paper-making value of worn mail pouches which have been declared unserviceable for postal use. Worn or damaged pouches are repaired in so far as practicable, but condemned ones and waste from the repair shop are mutilated into scrap and marketed as "junk" to the highest competitive bidder. The unavoidable treatment to which the pouches are subjected in train and station use causes them to become very dirty. Because of this condition the market price for the refuse material has been relatively low although the cloth used in the manufacture of the pouches is a good grade of cotton duck. As a result the General Supply Committee, Treasury Department, requested the investigation with the object of securing a better price for the waste if its paper-making quality was good.

Tests were made on a semi-commercial scale under practical conditions in the experimental paper mill of the bureau. Caustic soda and lime-soda ash were the digesting agents in the boiling process to free the cellulose fiber from the noncellulose impurities. The usual commercial procedure was followed in the preparation of the stock and its subsequent conversion into paper. Measurements were made of the physical properties of the finished sheets and corresponding data on papers from new cotton duck and from sulphite wood pulp were included as a basis for comparison.

Clean pulp was obtained from the waste pouches and the paper produced therefrom was stronger than that made from sulphite wood stock and compared favorably with many of the high-grade bond and rag writing papers on the market. This practical demonstration of the paper-making quality of the material resulted in increased revenue from its sale to papermakers amounting at present to around $17,000 annually.

A detailed report of this work was published in PAPER TRADE JOURNAL, 84, No. 19, 45-46, May 12, 1927 (Waste Mail Pouches as Papermaking Material, M. B. Shaw and G. W. Bicking).

d. Residue From Guayule Plant.

At the request of a rubber concern which is utilizing the Mexican guayule plant for production of rubber, some laboratory tests were made of the paper-making quality of the fibrous residue remaining after the extraction of the rubber constituents. The fiber was found to be weak and short and the yield of fiber low. The fairly large residue of rubber material is detrimental to good paper-making results. It was concluded that this material was of little value for paper-making although it could possibly be used in coarse board products if they were formed in molds.

e. Use of Glue in Paper.

The following studies made in cooperation with the Glue Research Corporation, which maintained a research associate at the bureau to assist in the work, were completed and the reports of them published.

Because of the possibility of improving certain desirable qualities of papers, especially those types made from the lower-priced fibers and containing mineral fillers, various methods of using glue in the beater sizing of paper was studied in cooperation with the Glue Research Corporation. Optimum operating conditions and maximum retentions of glue were obtained when the hydrogen-ion concentration was so controlled that the pH value approximated 4.5. The glue introduced no difficulties in the paper-making operations and the glue retention in the paper compared favorably with the clay retention. In general it was found that in papers sized with glue and rosin the strength is frequently improved and the degree of sizing is generally improved as compared with similar papers sized with rosin alone. These improvements were most noticeable in papers containing clay filler. The chief influence of glue on the various types of papers seems to be to enhance such intangible properties as firmness and handling qualities. (Glue as Beater Sizing, G. K. Hamill, M. B. Shaw, G. W. Bicking, PAPER TRADE JOURNAL, 84, No. 3, 38-43, Jan. 20, 1927.)

In studying improvements in the water resistance of glue-bound papers by treatment with formaldehyde, comparisons were made of several water-resistance test methods as well as of certain empirical tests commonly applied to coated papers. The indicator method was found applicable for comparing the water resistances of such papers. There appeared to be no fixed relation among the results obtained on coated papers by the several different test methods. The water resistance of glue-bound coated papers may be materially increased either by applying formaldehyde to the freshly coated paper or by incorporating formaldehyde in the coating mixtures. (Water Resistance of Mineral Coated Papers, G. K. Hamill, Technical Association Papers, Series X, No. 1, 20-25, June, 1927.) As this work, together with that previously done on the use of glue in coating paper and in surface sizing paper, covered the basic problems on the use of glue in paper the cooperative work was concluded. The work was brought to a fitting conclusion with the preparation of a manuscript for a hand book on the use of glue in paper. This manuscript was prepared by the Research Associate, G. K. Hamill, at the request of the National Association of Glue Manufacturers, who propose to publish the hand book. This hand book is to contain chapters on paper-making processes, and on uses of glue for beater sizing, surface sizing, and coating. The chapters dealing with the uses of glue are based largely on information developed in the experimental work done at the bureau. This book should be of value to both papermakers and glue concerns interested in paper-making glues, as there is very little information of this kind available in the literature.

f. Waste Thread From Rubber Tire Manufacture.

At the request of a manufacturer of rubber automobile tires, the paper-making quality of the waste thread from the gum-dipping process is being investigated. This one concern stated they had available about 200 tons per month of this material that is not utilized. As there are several such concerns, the aggregate amount of this waste would seem to be such as to justify consideration of it for paper-making purposes. The cotton thread is of good quality, considered as a paper-making material, but unfortunately, it contains a rubber residue which makes its utilization difficult. It is doubtful if it can be used for high grade papers, but the results so far obtained indicate that if the rubber residue does not exceed one per cent or so it can be used for boards and wrappings.

g. Roofing Felts

As a part of an investigation being made by the bureau respecting the durability of roofing felts, a number of the basic or "saturating" felt papers were made in the bureau semi-commercial mill. They were composed of different mixtures of the regular felt-making fibrous materials, rags and bagging, with lower-grade substitute materials, mixed papers and sawdust. The latter materials are not used commercially at present, but it was desired to include in the durability experiments papers containing these lower-grade materials in order to find whether they could be used without impairing the life of the felts in service, as considerable economy could be effected by their use. The felts were made at the request of the cooperating organization, The Manufacturing and Industrial Research Commitee of the Asphalt Shingle and Roofing Association, as they were unable to have them made commercially. Although the bureau equipment is not well adapted to making heavy papers of this type, the felts were pronounced very satisfactory by commercial experts. The felts were converted into asphalt

roofing in a commercial mill without difficulty. They had as good absorptive quality respecting impregnation with asphaltum as the ordinary commercial felts, but as was to be expected, because of their content of weak wood fibers, they had less strength than the latter. As one felt contained as high as 60 per cent of mixed wood-fiber papers and 30 per cent of sawdust, in combination with rag fiber, it would appear from the results obtained that quite large amounts of such materials can be introduced into roofing felts, without producing any great difficulty in the manufacturing processes. It remains to be found of course whether such practice is advisable from the standpoint of the durability of the felts.

III. United States Paper Currency

The research on improving the quality of United States paper currency for the purpose of increasing its service life was actively continued. This research is being made in cooperation with the Bureau of Efficiency and the Bureau of Engraving and Printing.

The work in the bureau semi-commercial paper mill in the direction of developing standard procedure for the manufacture of currency paper included further study of the beating procedure in dealing with the present fiber mixture, 75 per cent linen and 25 per cent cotton; studies of the use of other combinations of these fibers; and some investigation of the use of caustic soda for cooking the fiber as compared with the use of lime. The experiments on beating indicate that the optimum results are obtained by the procedure previously developed and described in the bureau technologic paper published last year. The results obtained with various mixtures of cotton and linen fibers indicate that the proportion of cotton fiber can be materially increased without greatly decreasing the quality of the paper. The use of caustic soda in cooking the fiber appears to lend increased strength to the paper and improves its printing quality. Additional data obtained on glue surface-sizing show that formaldehyde is preferable in many respects to the more commonly used alum, as a preservative for the glue sizing solution.

An important development was the finding that the strength imparted to currency paper by the glue sizing was practically all destroyed in the process used in printing the paper, but that the basic strength of the paper, or the strength due to the fibers alone, was not impaired by the printing. This has led the Treasury Department to adopt the type of paper developed by the bureau as the standard, for this paper is characterized by its high fiber strength. It has a folding endurance, unsized, of 5,000 folds. A study of commercial papers similar in type to currency paper showed the Bureau of Standards paper to have no counterpart commercially. In view of this situation fine-paper manufacturers in general were asked to cooperate in developing the new type of paper. Several concerns experimented in a commercial way. These experiments proved that the manufacturing procedure developed at the bureau is entirely feasible commercially. Commercial papers were produced equal in strength and printing quality to that made on a semi-commercial scale in the bureau.

Since the strength imparted to the currency paper by sizing is impermanent, a number of printing tests of unsized paper were made in cooperation with the Bureau of Engraving and Printing to find if the sizing could be eliminated without impairing the printing quality of the paper. This was found to be impracticable with the present printing process, but the results indicated that with some modification of the printing process good results would be obtained and considerable economy effected.

The worn-out paper currency returned to the Treasury Department for redemption, and a small proportion of spoiled paper and trimmings from the currency printing processes, together amount to approximately four tons daily. At the present time this material is macerated at the Bureau of Engraving and Printing and is sold in the form of pulp containing some 70 per cent of water and practically all the ink. No attempt is made to clean the pulp, the process being carried only far enough to comply with the requirements for protection against unlawful use of the waste paper, that is, that it be entirely defibered so that no printed characters can be distinguished and so that all distinctive features of the paper itself are removed. In this form, the pulp is suitable for coarse paper products only, such as certain grades of boards, owing to its large content of impurities which occur partly in the form of lumps. For this reason the price received is so low that the maceration of the material is being done at an annual loss of $15,000 to $18,000. As the original paper is composed of the highest grade linen and cotton rag fibers, a clean pulp produced from the waste paper should have a ready market for fine writing and printing papers at a considerably increased price. It is estimated that by thus improving the product the present loss can be turned to a profit amounting to $50,000 or more annually. The material presents unusual resistance to the ordinary de-inking treatments owing to the hardness and toughness of the paper, the large amount of ink present, and the resistant quality of the ink. It was found possible, however, through research in the Bureau of Standards paper mill, to completely de-ink and otherwise quite thoroughly clean it with semi-commercial machinery consisting of a duster, a rotary digester and a beater equipped with a drum washer. The paper produced from the pulp compared quite favorably with good grades of writing and printing papers.

New Lincoln Switch Start Motor

The Lincoln Electric Company, Cleveland, Ohio, announce a new switch start motor for which several advantages are claimed, and which is built in sizes from ½ to 30 HP and for either 2 or 3 phase, 60 cycle current.

This motor is so designed that it can be started directly across the line without the use of a starting compensator, starting resistance or other voltage reducing mechanism, with starting current below the requirements of the National Electric Light Association which is the standardization organization of the power companies.

The chief claim of the new switch start motor is that operating characteristics, such as power factor, efficiency, maximum torque, temperature rise, etc., have not been sacrificed in order to secure low starting currents.

Equal or better efficiency and power factor from 5 to 10 points higher than the ordinary self start motor are claimed for the switch start motors.

Tests show that starting torques of from full load to better than 250% of full load, depending on the horsepower and speed, are possible wihout exceeding the N. E. L. A. requirements as to starting currents.

A comparison of the speed torque curves of the switch start motors with the ordinary self start motors show that the switch start motor has equal or slightly higher actual torque at zero speed. The curve of the switch start motor then shows a gradually increasing torque up to the maximum torque point, whereas curves of the ordinary self start motor decrease sharply to a low point which is only a small percentage over the full load torque point and then increases to the maximum torque point. This gradually increasing torque of the switch start motor is highly desirable for starting many types of machinery.

On sudden high overloads it is claimed that the switch start motor also has a very high or maximum pull out torque which is of considerable importance in that this motor will not stall on sudden high overloads. This feature is in marked contrast to many self start motors where the operating characteristics have been sacrificed for starting characteristics.

It is claimed the temperature rise of the switch start motors under continuous full load has been found to be quite low, giving a cool running and long life characteristic.

The switch start motor is normally equipped with sleeve bearings, although ball bearings will be furnished at the customer's request.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Edited by
THOS. J. BURKE, C. A., Sec.-Treas.

Accountants' Responsibility for Inventories*

By C. Oliver Wellington, Scovell, Wellington & Co.

The recent report of the committee of your organization on Co-Operation with Public Accountants, closes with the words "It is our firm conviction that, as time goes on, accountants should be held to a greater rather than a lesser responsibility as concerns this very important item." As my personal opinion and the practice of my firm has emphasized this idea of a greater responsibility for inventory verification, I am very pleased to have the opportunity this evening of expressing to you some of my thoughts on this subject.

The topic is a timely one, not merely because the matter has been stressed by your committee and we are approaching the time when so many companies close their fiscal years, but because there is a regrettable lack of uniformity in the opinions of members of the accounting profession as to what responsibility public accountants should take in regard to inventories. The head of one large firm of accountants in an address delivered earlier in this year took a very definite stand on this question, saying, "I do not believe verification of physical inventories is within the competence of auditors."

Whether we believe or not that that auditor is competent to verify physical inventories, let us examine the situation as we find it affects public accountants and bankers.

In the first place we must recognize that the inventory in the case of the average manufacturing or trading concern, represents more than half of the total current assets. If any attempt is to be made to make the financial showing of the company more favorable than it really is, such a difference between the true facts and those the company would like to show can much more readily be concealed in the inventory than in any other current asset. It is hard to inflate the cash, it can easily be proved without difficulty whether the accounts and notes receivable were set up in the regular course of business and can reasonably be expected to be liquidated also in the regular course of business; but the determination of the fair value of the inventories is not so easy. Is that, however, a good reason for accepting this item without verification, relying on a certificate from some responsible officer of the company? If no verification is to be made of the inventory, which is over half of the total current assets, of what value for credit purposes is the auditor's certificate?

In obtaining material for this address I have talked with a number of bank credit men and some have gone so far as to omit from current assets all inventories, and loan on the basis of cash and receivables only, giving no credit for inventories as current assets, feeling that they know and can find out so little about the inventory in the average case. While such a statement undoubtedly is an exaggeration, there have been many cases over the last few years of large concerns failing for very large sums, in most of which cases the inventories as shown by the last public statement were grossly overstated. With these circumstances so vividly in your minds it is reasonable that you should want some definite verification other than the word of a responsible officer of the company for this very large and important part of the current assets. What is more natural than that you should expect the public accountant who signed the certificate accompanying the statement of such a company to give you that independent assurance? I believe that you are justified in this feeling and that the public accountant should be expected to give you his opinion on inventories as on other current assets.

Let us, therefore, examine the various relationships that may exist between an auditor and his client with regard to inventories, and see what he may do by way of verification in comparison with what he ought to do.

In general, the situation may well be summarized as follows:

Circumstances

1—Inventory determined by client and used without verification.....

2—Inventory taken and priced by client, but tested by auditor .....

3—Inventory taken or supervised by auditor.....

Degree of Auditor's Responsibility	Desirability
None	Minimum
Limited	Medium
Full	Maximum

No Verification by Auditor:

Cases where the auditor uses without any verification the inventory as determined by his client are sometimes the natural result of the special type of work undertaken. In the case of a proposed merger or consolidation, for instance the major significance attributed to earning power sometimes leads to a mutual acceptance of inventories without any verification by the auditor. (That such a practice is dangerous and should not be followed is clearly shown by cases where trouble has developed shortly after the accountants have prepared statements in connection with new financing, and disclosure of a substantial overvaluation of inventories has led to severe criticism of the auditors—whether they were wholly to blame or not.) Most cases of absence of verification, however, are the direct result of a refusal of clients to permit

*An Address before the New England Chapter, Robert Morris Association, From the Robert Morris Bulletin.

such work, regardless of the relative importance of the inventory item.

Where the auditor is not permitted to take any steps to verify the inventory, his only recourse is to qualify his certificate so as to indicate unmistakably that his determination of the true financial condition is limited by acceptance of the inventory as determined by the client. The auditor has a duty to himself to put any reviewer of the balance sheet definitely on notice as to the incompleteness of his audit procedure. Conversely, the reviewer of the balance sheet has a right to know this fact.

Where an inventory verification *ought* to be made—and such is true in most cases—the use of a qualified certificate is viewed by the progressive auditor as the resort in lieu of something better.

INVENTORY TESTS BY AUDITOR—

We come now to the second general type of circumstances—where the inventory is counted, priced, extended and footed by the client, but is later subjected to certain tests by the auditor. The exact character of these tests varies with individual auditors and individual cases; but merely as an illustration of the general scope, the following activities may be mentioned:

1—Obtaining copy of completed inventory, and test checking to original count records, however crude, and to perpetual inventory records.

2—Considering ownership of goods:
- A—In Warehouses.
- B—At other plants (e. g., dyehouses).
- C—On consignment.
- D—Under pledge as security for loans.

3—Checking inventory cut-off:
- A—Goods on hand-liability not on books.
- B—Goods not received—liability on books.
- C—Goods shipped—not billed.

4—Verifying valuation at cost or market, whichever is lower.
- A—Test checking raw material prices against original current invoices.
- B—Test checking costing of work-in-process and finished goods.
- C—Examining pricing of depreciated or obsolete stock.

5—Test checking extensions and footings.

6—Comparing total inventory with business done through tests of gross profit, quantities received and delivered, rate of turnover, and other similar tests.

No hard and fast rule exists as to the extent of the test checks to be made. The value of the client's internal checks, the extent and the accuracy of the cost system, the availability and the worth of collateral evidence—all have their bearing. In general, however, the theory is that the auditor shall perform sufficiently extensive tests to satisfy himself as to the substantial accuracy of the inventory; and that, if more work along any one or more lines is demanded by errors discovered, he shall pursue his verification, after explanation to the client, to the point where further errors will probably be relatively negligible. In other words, the responsibility of the auditor increases rather than diminishes with extra work required by circumstances.

With his tests completed in a manner satisfactory to himself, the auditor is then prepared to assume a responsibility for the inventory limited only by his acceptance of the *quantities* as certified to him by the client.

The primary difficulty with ordinary inventory tests, is that the absence of a check on *quantities* leaves the question of understatement or overstatement wholly undecided. If a client lists 20,000 pounds of linotype metal instead of 2,000, either through accident or design, of what avail is verifying the price at 12 cents, and extending the value? Or of what real use is it for the auditor's assistants to correct errors of $2,543.86 in extensions and footings, when the total inventory may be $25,000 over or under, owing to the use of incorrect quantities?

It would be difficult for the officers of a company to organize a conspiracy throughout the plant, so that men could take an inventory incorrectly and alter plant records without detection. It would be easy, however, for the officers in collusion with a few office clerks to mark up inventory quantities so as to perpetrate fraud on a large scale. In the Hamilton Manufacturing Company case stock in process was carried at $1,207,290, but an actual count later by auditors showed a correct inventory of only $234,542, inventory reports from mills having been raised at the general office. In a recent case an inventory valued at $2,400,000 was overstated $1,100,000, the auditors having merely accepted some neatly typewritten sheets and made some mathematical tests. They did not even reconcile the factory ledger and the general ledger, although these were much out of balance due to irregularities.

The progressive auditor feels that, no matter how well the "ordinary tests" are performed, there is a *vital* weakness in an inventory certification which does not cover quantities; and that the auditor should do everything in his power to measure up to his opportunity by verifying quantities also. Otherwise his certificate is only of medium worth.

Inventory Taken or Supervised by Auditor

The third typical situation is where the auditor is directly responsible for actually taking the inventory or intimately supervising it. The occasionally expressed conviction that the auditor is not really competent to carry such work to a successful conclusion, is due at least in part to the lack of a clear understanding as to what such work properly means. Substantially it means this:

1—Pre-Inventory—
- A—Arranging with client as to date, and shut-down of operations.
- B—Determining kind of tags and inventory sheets.
- C—Having tags properly numbered.
- D—Issuing instructions for their use and return, used or unusued.
- E—Arranging for listing of tags on inventory sheets, for pricing and for extending.
- F—Arranging for suitable internal checks.

2—Inventory—
- A—Supervising inventory procedure, to see that it is functioning properly.
- B—Taking inventory tags after listing, and making test counts.
- C—Test checking tags to duplicate set of inventory sheets, to be retained by the auditor.
- 4—Giving special attention to goods in shipping and receiving rooms.
- E—Inspecting inventory groups for unsalable stock.

3—Post-Inventory—
- A—Comparing client's official inventory sheets with auditor's duplicate set to check additions, eliminations or alterations of quantities.
- B—Continuing with the test checks previously outlined for the ordinary audit.

From the foregoing outline it will be apparent that the auditor, in assuming full responsibility for inventory verification, departs from what has been called "ordinary" audit procedure only in that he participates in preinventory work and in the counting of the inventory date. Now why is he not competent to do this?

Not Competent to Arrange Procedure!

Whether or not the auditor needs to organize the entire procedure for inventory taking depends, of course, on what the client already has available. Perhaps the auditor will find it necessary only to make certain improvements in practices formerly used by the client. But whether the preinventory work requires a complete system installation or merely the perfection of previous methods, the auditor ought to be competent to do the job.

Admittedly, auditors vary in their abilities to devise new or improved accounting methods. In other words, some are better qualified than others, by training and experience, to deal successfully with problems of *constructive* accounting, as contrasted with

analytical accounting. Whatever may be the gradations of skill required to handle various aspects of constructive accounting, however, it cannot be believed that any really qualified practitioners are incapable of making original installations of sound methods for inventory taking, or recommending necessary improvements in methods formerly used by the client. Even if a particular auditor is weak on this point, one must aver that he ought not to be, for to think otherwise would be to attribute a disgraceful restriction to the capacity of a professional man.

Not Competent to Count!

And why should not the auditor be able to count inventory items? Let us translate it into what is really meant—namely that the auditor, in counting, may be confronted with annoying difficulties. Barrels of oil may be full—of water; boxes of books may be full—of waste paper and waste type-meal. Grain, pig iron, sand, coal, logs are not easy to measure or count; and what endless days would be required to determine the quantities of seeds in the case of a flower and vegetable seed dealer, or the number of minute screws and other parts in a watch factory! All true, but inconclusive.

In the first place, you do not expect the auditor in most cases to compute the quantity of every item of inventory. Under extraordinary conditions he and his assistants may be called upon to take the entire inventory, without any help from the client's organization; but as a rule, his verification of quantities consists of making an adequate number of tests to satisfy himself as to the substantial accuracy of the client's counting. It is no more necessary for the auditor to count every item than it is for him to check every footing and posting in the books of account. The complete verification of every transaction is not the goal of even a detailed audit, for the modern rule clearly prescribes only *reasonable* checks, sufficiently extensive in view of conditions disclosed to warrant faith in the general accuracy of the records. So, in the case of inventories, an exact count of a reasonable number and variety of items, coupled with a general inspection of the others, is all that is needed to satisfy the auditor in assuming responsibility for quantities.

In the second place, in making his tests the auditor will naturally resort to all the protective, time-saving and labor-saving practices that are characteristic of professional skill. Test openings of barrels and boxes, and test drillings in raw material piles, made by the client's employees under the auditor's supervision; applications of formulas for transforming cubical contents into weights; counting the number of items in a standard space—such means are simply expressions of the auditor's expected ability. Certainly the auditor would never count every sheet in a pile of 25,000 flat-sheets of a book in process, when he could count one layer, or a basic quantity of say 500 sheets, and secure a very close approximation of the total by inspection. Thus the work of the auditor in verifying quantities consists partly in actually counting; but, to a more important extent, in formulating and applying various standards of judgment to minimize the work without detracting from the reasonable effectiveness of the check.

In this connection it should be remembered that records of the client may not be without value in verifying the inventory quantities. For example, wool, cotton, hides, etc., are commonly handled by rigid lot records, and it would be inexcusable for any auditor not to utilize these to supplement his counts in verifying what is on hand. Likewise, where the client uses continuous inventory records, tied in with cost and production records, the relationship of the quantities on these records to the test counts of the auditor ought to be an important factor in the determination of his final opinion as to the substantial accuracy of the physical inventory as a whole.

Truly the auditor ought to be able to go beyond the limits of "ordinary" procedure, and not only formulate proper arrangements for taking the inventory, but also make a satisfactory verification of the quantities. He can then give an unqualified certificate, which is of maximum worth.

I do not think that it should be necessary for the bankers to require independent investigations of inventories by industrial engineers, in addition to the report of the auditors, as I understand has been the practice recently with a number of New York banks. Although it is true that we have on our staff industrial engineers as well as accountants and that we use our engineers with our accountants on verification of inventories, we do not believe that in the average case any accounting firm that really wants to take responsibility for inventory verification would be unable to do so with their own staff supplemented by the special employment by the auditors of engineers or experts familiar with the particular business under consideration.

Question of Unsalable Stock

One further point regarding competency, however, remains to be discussed. The "ordinarily efficient audit," as commonly outlined, provides for a check against the excessive valuation of stock which is not readily salable because of depreciation or obsolescence; but many such audits are defective in their consideration of unsalable stock, without any corresponding qualification of the auditors' certificates.

As a matter of fact, although an auditor may encounter difficulties in judging unsalable stock at his first audit they are not insuperable, and they become less with repetitions of the work. Does it require any unusual perspicacity on the part of the auditor to decide that goods are not worth their cost in cases such as these:

1—When a publishing house prints 50,000 copies of some sensational war memoirs, and sells 20,000 copies within two months and practically none in the next six?

2—When a worsted goods mill has hundreds of pounds of fancy yarns, and has almost entirely turned from making mixed goods to plain goods?

3—When a corset manufacturer has a stock of "steel-cages" mixed in with the elastic "wrap-arounds" now in vogue?

4—When a radio manufacturer still has some multiple-control, transformer amplified sets alongside his new single dial, impedance-coupled models?

It is not to be supposed that the auditor will have as intensive a knowledge of sales conditions as the sales manager of his client; but from his general business knowledge, and from his acquaintanceship with his client's operations, market and turnover, he ought to be able to reach definite conclusions as to what goods need low valuations because of unsalability. In special cases, in order to determine the relative probability of the usual profitable conversion and sale, the auditor can age the inventory, as we are doing right now in a worsted mill by classifying current and old materials, and also ascertaining what old materials are being requisitioned for current orders.

A Machinery Manufacturer's Inventory

In order to show that the assumption of full responsibility for inventory verification is entirely feasible, I am going to cite a few significant aspects of inventories taken or supervised by my firm. I do this not to convey the idea that our practice is unique, but merely to illustrate what can be done by any auditor who does not shy away from inventory verification.

One of our clients, manufacturing machinery, has an inventory of about 45,000 parts. They could not run such a business without complete stock records. Whenever their cards come down to the minimum quantity, they verify that fact in their stockroom. Moreover, they verify a certain number of items each day or week, whether the minimum is reached or not. In fact, the company so strongly insists on accuracy that it uses two men continuously on inventory checking, and covers the whole inventory twice a year.

When verifying the inventory at the end of the year, so as to issue an unqualified certificate, we make it a point to see that the internal check has covered every item since a certain date.

COST SECTION

This date may be September 1, or October 1, or even as far back as August 1.

We also select at random a certain number of cards from each inventory account, and check these against actual counts. If we get an almost perfect score on these, we feel satisfied that the perpetual inventory has been operated with reasonable precision. If the score is not satisfactory, we pursue the check until we are satisfied.

We then give attention in pricing and extensions to items which bulk large in value, and also to typical small items. In each group we indicate the percentage of the total value checked.

We also consider what if any part of the inventory is obsolete. We view with suspicion all items which have not moved for a year or more, and we see that all obsolete and unsalable materials are valued as scrap; or, if worth something more than scrap for renewals on machines no longer manufactured, at some appropriate prices.

In this way we easily verify the inventory as far as it relates to what is in the stock room, and has not come out onto the floor to be put together in machinery.

A business manufacturing complicated units can not, of course, go on unless it has a good cost system, and that implies that there is brought onto the job the value represented by parts drawn out of the stock room and assembled, or ready to be assembled. So we make tests as to the accurate accumulation of costs on work-in-process, and then we prove up jobs-in-process just the way we prove a trial balance of accounts receivable. Jobs-in-process are ordinarily absolutely current because they are either for machinery on order or something that is being made for stock and sold right along.

An inventory of finished goods may mean articles like completed machines ready to ship to customers, or it may mean a multitude of finished parts on which all the required work has been done, but which have no sales value until assembled. Finished machines, finished groups and second-hand machines we check completely; the balance of the finished goods inventory we cover by tests. In the parts particularly, and to some extent in the finished machines, we make a searching investigation as to obsolescence as we do in the case of raw materials.

In a Tannery

In a tannery we went to the tanks where they suspend the hides, just below the top of the tanning liquor, and we examined row after row to see whether there were three or thirty hides in each tank. We did this as an ordinary kind of task in getting a correct inventory.

In the case of hides in piles, we did not actually count every pile, for we knew that the workmen had been given systematic instructions as to how to count those hides, and the inventory had been properly supervised. Burke said in his speech on conciliation with America, that he did not know the method of drawing up an indictment against a whole people, and no one could corrupt a whole factory force. So we made test counts of some piles; in the case of others, we were not able to tell exactly whether there were 330 or 340 hides in each, but by suitable physical inspection we protected ourselves against any appreciable error.

In this tannery inventory, furthermore, we could establish a close relation between the physical count by lots and the so-called "working-in" record.

That relationship is of great importance in some other industries where lot and stock records are kept, as for sheet metal by sizes, lumber by grades, etc. That is, the business must keep these internal records in nearly perfect order in order to handle its daily routine, and the combination of such records with physical count or inspection makes a complete verification.

Inventorying a Department Store

We have gone into the furniture department of a department store, put a tag on every chair, every sofa, every vase, every bureau, every bedstead and so on, given instructions as to the description, and then related the items to the invoices; and since they had a suitable stock record, the inventory was test checked with that. A different practice was, of course, necessary when dealing with handkerchiefs, laces, spools of silk, etc. We had to adapt our test to the physical problems all the time, sometimes with heavy reliance on records that the client was already keeping, and sometimes with very little.

Publishing House Procedure

In the case of a book publisher we took possession of all tags for raw materials as fast as listed by the company's clerks on inventory sheets, made test counts in the stock rooms and warehouses, and checked the verified tags to our copy of the inventory sheets. We made test counts of work-in-process in the press room, flat-stock room and bindery, and checked up with the work-in-process records under the cost system. We made test counts covering the folded and gathered stock held in the warehouse, and satisfied ourselves that the perpetual inventory record of such stock was correct. We made similar counts and checks covering the records of bound stock.

All this work was done at inventory date. When we returned for the remainder of the audit work, we checked our duplicate inventory sheets and special working papers against the company's inventory, which had been priced and extended. We then proceeded to satisfy ourselves that the pricing and the mathematics were correct.

Obsolete Stock in Automobile Plant

The importance of an examination for obsolete stock is well shown in the automobile industry Here runs are fairly long for each part manufactured, so that in a great many, if not all, manufacturing plants, parts for old models will be found in excess of reasonable requirements for servicing the actual cars or trucks in use. This raises the question of the valuation of many parts, some of each kind having a perfectly sound value, but any excess beyond service requirements having only a scrap value.

In verifying the inventory at an automobile plant, we had them prepare inventory sheets showing the inventory items on the left-hand side and, in columns, the inventory of each part in the factory parts department, the factory service department and each branch. We then ran down various items and found some ridiculous situations. For example, we found several thousand of a particular part which was usable only on a tractor which has been turned out in a comparatively small number. By considering the demand from branches and dealers for that part, we calculated that the factory alone had enough parts to service the tractor for from 800 to 1,200 years!

Desire Full Responsibility

As might be inferred from the foregoing discussion and illustrations, my firm for a long time has taken the position that the auditor should take full responsibility for inventory verification. We have no sympathy whatsoever with the idea that a part of the current assets should be valued independently, by the auditor, but that one of the most important parts, the inventory, should be determined by the concern under audit. In our opinion, the certificate which says "accepting the inventories as furnished to us by the company," is almost useless; and we think we have a duty to convince our clients of a responsibility on our part with respect to inventories—a responsibility which we are perfectly willing to have put up to us.

In some cases over our objections, we are obliged to accept inventories without any verification of quantities, price or mathematics (although we would never do this for a certified balance sheet for credit purposes). In such cases, under our standard practice rules, we say: "accepting the *inventories* as furnished to us by the treasurer of the company, we certify that in our opinion the above balance sheet, subject to the comment, etc." In our collateral comment we repeat the acceptance of the inventory furnished, and state that we take no responsibility for quantities,

prices or mathematics. We do this to put the reader definitely on guard against the unverified item.

In cases where we are not allowed to actually take the inventory or intimately supervise it, but take responsibility for prices and mathematics, we say "accepting the inventory quantities as furnished to us by the treasurer of the company."

In cases where we do not actually take the inventory or intimately supervise it, but are able later to make satisfactory tests of quantities and take full responsibility for prices and mathematics, we omit the above qualification from the certificate, and state in our comments that we did not check the actual quantities at inventory date but made sufficient tests later to satisfy ourselves.

In cases where we take full responsibility for quantities, prices and mathematics, we state that "we have made an examination of the accounts, records *and inventories*," and we certify without qualification. Furthermore, instead of "fairly" or "conservatively," we use the word "correctly"—i.e., we say, "the balance sheet correctly sets forth"—for we reserve this word for use only when we have been allowed to do everything we wanted to, when we are perfectly satisfied as to the existence of all the assets and the liabilities, and when we feel that the valuations placed on the assets and the liabilities are as nearly accurate as it is practicable to state them.

In short, we believe in the assumption of full responsibility for inventory verifications, and we give unqualified certificates only when such verification is possible. Where we are not allowed to assume the responsibility, we state the precise terms of our responsibility in our certificate and comments—that he who runs may read.

Cost Not Unreasonable

It may be useful, too, to throw the light of our experience upon the contention that the assumption of full responsibility for inventory verification would mean greatly increased fees to clients, out of all proportion to the benefits to be derived. It is often argued that between an enormously costly "complete" audit, unnecessary in most cases, and a cheap superficial audit, wasteful and dangerous, there is a golden mean where an audit wholly justifies its cost. But does it follow, as inevitably as night follows day, that inventory verification is automatically excluded from the golden mean?

There certainly are degrees beyond which the auditor cannot reasonably ask his client to spend money, and no sane auditor extends the scope of his audit procedure unduly. No sound reason exists, however, why the auditor should not urge his client to spend money on the matters that really count. An enormous amount of time devoted by auditors to what Kipling calls "footing and carrying one," when what is really wanted is a reliable answer to the question: what are the values there? The auditing practice of this country as a whole spends too much time on checking postings and running down 23-cent errors in bank balances, while considering that an inventory within 15% or 20% is close enough. The vital point, therefore, is not as to how much inventory verification would increase the cost of audits, but how auditors are going to meet fully the responsibility of so organizing and conducting their work as to make it count for the most to their clients.

The fact is, that the auditor can make inventory verification an integral part of his program without undue cost to the client. We know from experience that we can assume full responsibility for from 30% to 50% of the audit fee—the exact amount in any case depending, as it should, upon the relative importance of the inventory among the items to be verified. Fees certainly do not have to be "multiplied," as some accountants have claimed would be the case. Upon this basis we have emphasized to our clients the importance of our assuming full responsibility for inventory verification, and we have met with a gratifying response.

A few decades ago auditors were told emphatically not to touch inventories, but a feeling has developed that this constitutes a lax point in auditing practice. I believe that were a thorough canvass to be made among auditors of high standing in the profession, a surprisingly large number would be in favor of exercising full responsibility for inventory verification—not merely accepting it, but demanding it. They are not insurers, but they do feel competent to express reliable opinions.

The first requisite for the accountant is a desire to really verify the inventory and, having that, he then needs an ability to size up the situation and plan the verification to obtain reasonable results with a reasonable amount of work and fee

On this question of fee we need the support of the bankers. The present situation in many cases is grossly unfair to the accountants, inasmuch as the bankers do not urge with sufficient strength that the companies have a real job done and pay accordingly, but often accept a certified statement without being too fussy as to what is back of the certificate The accountants should not be left alone in urging the importance of this work as part of the audit, but should have the cordial backing and support of banker to see that his customer pays for the amount of work necessary. The verification of inventory as part of an audit does not necessarily mean that the total cost would be increased 30%, as some details which are rather unimportant can be given less attention than they often receive, but in a proper consideration of an audit attention should be given to the relative size of the several assets and liabilities and the inventories should have a fair share of the total work done in comparison with their importance

I think the bankers have in some cases been unfair to the accountants in holding them to blame for a state of affairs in regard to lack of verification of the inventory which the accountants very clearly and definitely stated in their certificate had not been verified. It is too much to expect at the present time that any accounting firm will refuse to accept an engagement unless it includes a complete verification of the physical inventory, but a complete verification, in my opinion, is what the accountants should try to persuade the clients, and what the banks should try to persuade the clients, would be most satisfactory for all concerned. If the bank credit men give a substantially higher value to an audit certificate which indicates a full responsibility for inventory, and if this fact is generally known, there will, in my opinion, be a gratifying increase in the number of thoroughgoing pieces of work done. This much certainly is true—that any banker who seriously wants an inventory verification, and will strongly support the idea, can find more than one auditor who is qualified by training and experience to perform this work satisfactorily, and who, far from shirking the task, will welcome it.

Modification of Anti-Trust Laws

Extracts from Annual Report of Secretary of Labor:

"In a large measure the Sherman Act and other forms of anti-trust enactments have been so equitable in the conservative protection they have given to business interests and to the public interests as well, thus permitting ethical competition so necessary to good business and good government, that hardly anyone would wish to see the complete abolition of the anti-trust principles which prevent powerful monopolies from securing despotic control of income and wealth.

"* * * It frequently appears that improvements could be made in the present status of our anti-trust principles. In fact, I have observed not a few situations in which it seemed to me that consolidation or combinations in the field of industry would be of much benefit to the general public and to those who have been directly concerned in several unfavorable industrial situations. In other words, it has seemed to me that the spirit and interest of anti-trust principles could have been retained, and, yet, that adjustments could have been made which would have relieved a tense industrial situation. For not all business consolidations are illegal; nor, does it seem to me, are all prosecutions enumerated under anti-trust principles properly applicable to industrial leaders, whose first concern is usually to meet the laws of supply and demand. It is only when trade is flagrantly restrained, as I understand it, that competition is endangered by monopolistic combinations. * * *"

—From *National Lumber Manufacturers Association Bulletin.*

Obituary

Benjamin Franklin Nelson

[FROM OUR REGULAR CORRESPONDENT]

MINNEAPOLIS, Minn., January 23, 1928.—Benjamin Franklin Nelson, head of the B. F. Nelson Manufacturing Co., pioneer Minneapolis lumberman and paper manufacturer, and a Confederate veteran of the famous Morgan's brigade, died January 11 at his home, 35 Groveland terrace. He had been ill for three weeks. Mr. Nelson was almost 85 years old.

Few men have figured so largely in the industrial development of Minneapolis as Mr. Nelson. Born of poor parents in the South and with practically no education, he came to Minnesota at the close of the Civil War. He worked at rafting logs for a time, saved his wages and finally developed one of the biggest lumber and paper industries in the northwest.

As his business ventures progressed, his interests expanded to include other lines and many civic connections. At the time of his death he was chairman of the board of the B. F. Nelson Manufacturing Company, president of the Hennepin Paper Company, which has a mill at Little Falls; president of the Marlen Realty Company; vice president of the Norris Creamery Company, and a director of the Northwestern National Bank and of the Northwestern National Life Insurance Company. In his later years, his attention returned to his boyhood interest in agriculture and he purchased and developed two fine farms, one in Rice county, Walnut farm, and the other, Intervale farm, near Hopkins, where he raised fine pure bred cattle and other livestock.

He was a 32nd degree Mason and a Shriner and a member of the Minneapolis and Lafayette clubs.

Although Mr. Nelson's education was limited to a few months a year when he was a boy in Kentucky, he became keenly interested in education, and in 1914 was elected president of the board of regents of the University of Minnesota, succeeding former Governor John Lind. He was a member of the board of regents for 11 years and served for six years on the board of education. He also had served on the board of managers of the Minnesota state prison.

Mr. Nelson was born in Greenup county, near Greenupsburg, Ky., May 4, 1843. The family of 11 children, of which Benjamin was the tenth, lived in a log house and his father worked as a farm hand for 50 cents a day. Young Benjamin rarely was able to attend school for more than three months a year, and this was at a school where a charge of 5 cents a day tuition was charged. He developed an early desire for learning, however, and was a consistent reader of the classics and the Bible all through his life. As a boy, young Nelson took part in the community debates, and once carried off the honors in an oratorical contest on the respective merits of Lafayette and Washington.

When the Civil War broke out the family was at Vanceburg, on the Ohio River. Like many other youths of the time, Benjamin sought to join the cavalry. He equipped himself with a horse and a shotgun, and later with two navy pistols and a saber. He served with General N. B. Forrest and later with Morgan's raiders. His biggest battle was at Chickamauga, where he was with Morgan, whose force then numbered only 300 men.

He was captured by the Federal troops and was one of the three lucky men out of seven to escape the rifles of the captors. Later he was taken to Camp Douglas, now Douglas Park, Chicago, where he was held until the end of the war.

Matthias Plum, Jr.

NEWARK, N. J., January 21, 1928.—Matthias Plum, Jr., of this city and Rumson, died last Sunday in Park West Hospital, New York. Death was due to peritonitis. His wife and three children were with him. Matthias Plum, Jr., was born in this city December 8, 1865. His father, who died February 14, 1916, was the founder in 1864 of Matthias Plum, Inc., Newark printers, stationers and paper merchants, once the largest firm in that business in New Jersey.

Mr. Plum was educated at Newark Academy. He was associated with his father's firm until December 4, 1905. Just prior to his withdrawal from the firm he purchased the plant of the Wheeler Manufacturing Company and founded the Waverly Paper Board Company at 139 Haynes avenue, which he headed at the time of his death. He was also vice president and general manager of the United Paperboard Company.

On April 23, 1890, he married Mary Campbell Gaddis, daughter of Elisha Bird and Mary C. Gaddis, of this city. The widow and three children survive. They are Matthias Plum, 3rd, who recently was graduated from Yale; E. Gaddis Plum, prominent in polo circles, and Mrs. Mary Plum Potter, all of Rumson.

A sister and two brothers also survive. They are Mrs. George W. Downs and S. Haines Plum, 2nd, both of Madison, and William Terhune Plum, of Allenhurst.

Bernard Early

BOSTON, Mass., January 23, 1928.—Bernard Early, who was connected with the box board manufacturing business for many years, died recently at his home in Newton, Mass. He was associated with Frederic M. Crehore, whose mill was at Newton Lower Falls. On his death Mr. Crehore bequeathed the business to Mr. Early, who sold it after a few years, retiring in 1920. Mr. Early, who had been ill for about a year, was for a long time prominent in civic and business affairs in Newton. He was born in that city and educated in the public schools there. He was vice-president of the Newton Savings Bank and a trustee of the Newton Hospital and several other corporations at the time of his death. Mr. Early served eight years in the Newton Board of Aldermen, the last two as president. He represented Newton six years in the Massachusetts Legislature and served with distinction as House Chairman of the committee on State Administration. He also served on the Webster Commission under Governor Cox. He was recognized by Governor Guild as a tax expert and was a member of the Guild commission for the revising of the Massachusetts tax laws.

During the World War he was secretary of the Newton Exemption Board. He retired as president of the Claflin Guard Veterans' Association during the last year, and was a fourth degree knight, charter member and past grand knight of the Newton Council, Knights of Columbus.

John Alfred Kimberly

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., January 23, 1928.—John Alfred Kimberly, one of the founders of the Kimberly-Clark Company, Neenah, Wisconsin, died Saturday morning at his estate at Redlands, California, following a protracted period of declining health.

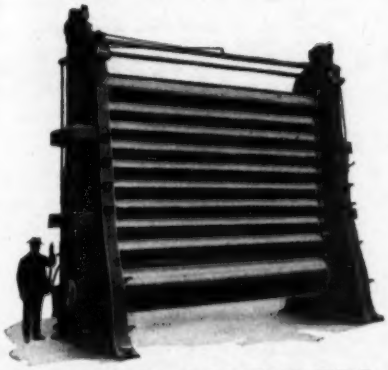
Mr. Kimberly was president of the Board of Directors of the Kimberly-Clark Company, president of the Neenah Paper Company and chairman of the Board of Directors of the First National Bank, all of Neenah, Wisconsin. Funeral services will be held at Redlands and burial will be at Neenah.

The deceased entered the paper industry in 1872 when the Kimberly-Clark corporation was organized and was the dominating factor in its growth to one of the largest in the country, with mills in both the United States and Canada. Mr. Kimberly was ninety years old at his death.

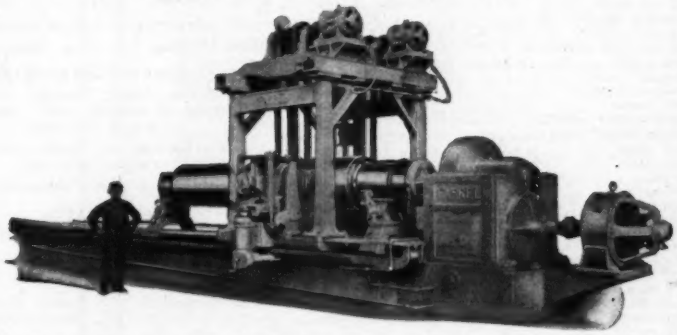
Deubener To Move to Indianapolis

INDIANAPOLIS, Ind., January 23, 1928.—The Deubener Shopping Bag plant is to be removed from St. Paul, Minn., to this city. The concern will occupy a fine new daylight factory one block from Garfield Park, located on a two acre tract of land on the Pennsylvania Railroad trackage. It is planned to expedite the removal in every way and it is hoped to have the new plant running smoothly by April 15.

FARREL



FARREL NEW TYPE ROLL GRINDER is made in 24", 32", 36" and 42" sizes all electrically driven throughout and fitted with new crowning device, Geared Head, Automatic Lubrication, etc.



FARREL CALENDERS are made with Hydraulic, Electric or Ratchet Lift, all operated from the floor.

FARREL-BIRMINGHAM COMPANY INC.,
ANSONIA, CONN.

Successors to: { Farrel Foundry & Machine Co., Ansonia, Conn., Est. 1848. / Birmingham Iron Foundry, Derby, Conn., Est. 1836.

Dayton Globe
Lever Dump Valve

1. Replaces old fashioned flat dump valve
2. Fits any make or size beater —right or left hand
3. Positive in action—lid cannot blow open
4. Very handy and fast—just pull the lever

Can be installed at a reasonable cost in any make beater. Write now for price and details.

Dayton Dump Valves built in three sizes, 10-inch, 12-inch and 16-inch. Specify size when ordering.

Dayton Globe Iron Works
DAYTON, OHIO

Sulphur

A FIRST REQUISITE

IN

Paper Making

Large Production
Ample Reserves
Prompt Deliveries
Purity 99½%

TEXAS GULF SULPHUR CO.
41 E. 42nd Street New York City
Mine Gulf, Matagorda County, Texas

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING JANUARY 21, 1928

SUMMARY

Cigarette paper .....5,257 cs.
Wall paper .....15 bls., 2 pkgs., 1 cs.
Paper hangings .....6 bls., 8 cs.
Pergamyn paper .....19 cs.
Stencil paper .....20 cs.
News print .....4,786 rolls
Printing paper .....85 rolls, 353 cs.
Wrapping paper .....9 cs.
Packing paper .....10 bls., 1 cs.
Decalcomania paper .....63 cs.
Filter paper .....50 bls., 26 cs.
Drawing paper .....74 cs.
Parchment paper .....16 bls.
Photo paper .....2 cs.
Baryta coated paper .....41 cs.
Surface coated paper .....92 cs.
Basic paper .....22 cs.
Crepe paper .....2 cs.
Silk paper .....31 cs.
Writing paper .....33 cs.
Straw board .....284 rolls
Miscellaneous paper ....606 rolls, 217 bls., 25 cs.

CIGARETTE PAPER

R. J. Reynolds Tobacco Co., Schodack, St. Nazaire, 2,070 cs.
De Manduit Paper Corp., Schodack, St. Nazaire, 908 cs.
American Tobacco Co., Schodack, Bordeaux, 1,600 cs.
Standard Products Corp., Ontario, Havre, 75 cs.
Standard Products Corp., MacKeesport, Havre, 40 cs.
De Manduit Paper Corp., MacKeesport, Havre, 366 cs.
De Manduit Paper Corp., Pipestone County, Havre, 198 cs.

WALL PAPER

F. J. Emmerich, Alaunia, London, 1 cs., 13 bls.
Atlas Wallpaper Co., Westphalia, Hamburg, 2 bls.
A. C. Dodman, Jr., Inc., Homeric, Southampton, 2 pkgs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Scythia, Liverpool, 6 bls., 1 cs.
Whiting & Patterson Co., Inc., Homeric, Southampton, 7 cs.

PERGAMYN PAPER

F. C. Strype, Westphalia, Hamburg, 19 cs.

STENCIL PAPER

Arlac Dry Stencil Co., Westphalia, Hamburg, 20 cs.

NEWS PRINT

M. Gottesman & Co., Inc., Malaren, Gothenburg, 278 rolls.
Parsons & Whittemore, Inc., Pres. Roosevelt, Bremen, 220 rolls.
Brooklyn Times, Humberarm, Cornerbrook, 846 rolls.
New York Times, Humberarm, Cornerbrook, 1,585 rolls.
N. Y. Telegram, Humberarm, Cornerbrook, 689 rolls.
Parsons & Whittemore, Inc., Luossa, Hamburg, 997 rolls.
Ossian Ray, Stockholm, Gothenburg, 109 rolls.
F. Henjes, Jr., Westphalia, Hamburg, 62 rolls.

PRINTING PAPER

Walker, Goulard, Plehn Co., Pres. Roosevelt, Bremen, 79 cs.
National City Bank, Pres. Roosevelt, Bremen, 214 cs.
E. Dietzgen & Co., Grootendyk, Rotterdam, 6 cs.
P. C. Zuhlke, Arabic, Antwerp, 48 cs.
Sinclair Valentine Co., Westphalia, Hamburg, 6 cs.
Keuffel & Esser Co., Westphalia, Hamburg, 85 rolls.

WRAPPING PAPER

C. Steiner, Westphalia, Hamburg, 9 cs.

PACKING PAPER

Consumers Paper Co., Grootendyk, Rotterdam, 3 bls.
Birn & Wachenheim, Arabic, Antwerp, 7 bls., 1 cs.

DECALCOMANIA PAPER

L. A. Consmiller, Pres. Roosevelt, Bremen, 12 cs.
C. W. Sellers, Pres. Roosevelt, Bremen, 19 cs.
B. F. Drakenfeld & Co., Celtic, Liverpool, 26 cs. (duplex).
L. A. Consmiller, Westphalia, Hamburg, 6 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Vardulia, London, 4 cs.
H. Reeve Angel & Co., Inc., Amer. Merchant, London, 18 cs.
H. Reeve Angel & Co., Inc., Homeric, Southampton, 50 bls., 4 cs.

DRAWIN GPAPER

Keuffel & Esser Co., Westphalia, Hamburg, 74 cs.

PARCHMENT PAPER

Walker, Goulard, Plehn Co., Westphalia, Hamburg, 16 bls.

PHOTO PAPER

J. H. Schroeder Banking Corp., Berlin, Bremen, 2 cs.

BARYTA COATED PAPER

Globe Shipping Co., Pres. Roosevelt, Bremen, 41 cs.

SURFACE COATED PAPER

P. C. Zuhlke, Arabic, Antwerp, 30 cs.
Gevaert Co. of America, Arabic, Antwerp, 62 cs.

BASIC PAPER

American Express Co., Arabic, Antwerp, 22 cs.

CREPE PAPER

L. Greenberg & Son, Westphalia, Hamburg, 2 cs.

SIL KPAPER

Meadows, Wye & Co., Grootendyk, Rotterdam, 31 cs.

WRITING PAPER

L. Bamberger & Co., Pipestone County, Havre, 3 cs.
J. E. Bernard & Co., Arabic, Antwerp, 29 cs.
American Express Co., MacKeesport, Havre, 1 cs.

STRAW BOARD

Perkins, Goodwin & Co., Grootendyk, Rotterdam, 138 rolls.
A. Vuyk, Grootendyk, Rotterdam, 146 rolls.

MISCELLANEOUS PAPER

Watch Tower Bible & Tract Soc., Malaren, Helsingfors, 74 rolls.
P. H. Petry & Co., Grootendyk, Rotterdam, 2 cs.
S. Gilbert, Grootendyk, Rotterdam, 18 cs.
D. S. Walton & Co., Luossa, Hamburg, 248 rolls.
M. M. Cohen, Luossa, Hamburg, 183 rolls, 74 bls.
Wilkinson Bros., Inc., Stockholm, Gothenburg, 46 bls.
Hope Paper Co., Stockholm, Gothenburg, 55 rolls.
Gilbert Paper Co., Stockholm, Gothenburg, 46 rolls, 97 bls.
E. H. Sergeant & Co., Stockholm, Gothenburg, 1 cs.
The Eleto Co., Homeric, Southampton, 4 cs.

RAGS, BAGGINGS, ETC.

Darmstadt, Scott & Courtney, Bellepline, Rotterdam, 91 bls. bagging.
Castle & Overton, Inc., Anaconda, Rotterdam, 193 bls. rags.
Darmstadt, Scott & Courtney, Anaconda, Rotterdam, 70 bls. bagging.
Castle & Overton, Inc., Berlin, Bremen, 248 bls. rags.
E. J. Keller Co., Inc., Schodack, St. Nazaire, 192 bls. rags.
Castle & Overton, Inc., Schodack, St. Nazaire, 145 bls. bagging.
Castle & Overton, Inc., Schodack, St. Nazaire, 105 bls. rags.
V. Galaup, Schodack, St. Nazaire, 111 bls. rags.
Goldman, Sachs & Co., Schodack, St. Nazaire, 135 bls. rags.
C. R. Spence, Schodack, Bordeaux, 72 bls. rags.
Chase National Bank, Ontario, Havre, 110 bls. rags.
Castle & Overton, Inc., Ontario, Havre, 195 bls. rags.
Royal Mamfg. Co., Ontario, Havre, 67 bls. cotton waste.
Garfield National Bank, Pres. Roosevelt, Bremen, 61 bls. rags.
U. S. Lines, Pres. Roosevelt, Bremen, 55 bls. rags.
A. W. Fenton, Inc., Pres. Roosevelt, Bremen, 58 bls. rags.
Castle & Overton, Inc., Pres. Roosevelt, Bremen, 176 bls. bagging.
Castle & Overton, Inc., Pres. Roosevelt, Bremen, 147 bls. rags.
E. J. Keller Co., Inc., Pres. Roosevelt, Bremen, 82 bls. bagging.
M. Snedeker Corp., Winona County, Belfast, 130 bls. paper stock.
Equitable Trust Co., Vardulia, London, 74 bls. rags.
Darmstadt, Scott & Courtney, Pipestone County, Dunkirk, 144 bls. rags.
D. I. Murphy, Pipestone County, Havre, 319 bls. rags.
A. Bloch & Co., Celtic, Liverpool, 35 bags hue cuttings.
E. J. Keller & Co., Inc., Celtic, Liverpool, 34 bls. rags.
Ayres W. C. Jones Co., MacKeesport, Havre, 191 bls. thread waste.
V. Galaup, MacKeesport, Havre, 121 bls. rags.
P. Colaie, Winona, Genoa, 100 bls. rags.
E. Butterworth & Co., Inc., Winona, Leghorn, 134 bls. rags.
Banco Com'l Italiane Trust Co., Winona, Leghorn, 35 bls. rags.
Equitable Trust Co., Winona, Leghorn, 11 bls. rags.
E. Butterworth & Co., Inc., Eastern Dawn, Antwerp, 103 bls. rags.
E. J. Keller Co., Inc., Eastern Dawn, Antwerp, 56 bls. bagging.
The Barrett Co., Eastern Dawn, Antwerp, 132 bls. rags.
Bulkley, Dunton & Co., Wytheville, ——, 39 bls. rags.
E. J. Keller Co., Inc., Luossa, Hamburg, 33 bls. rags.

OLD ROPE

W. Steck & Co., Ontario, Havre, 43 bls.
Brown Bros. & Co., Ontario, Havre, 77 rolls.
W. Schall & Co., Ontario, Havre, 75 bls.
Brown Bros. & Co., Grootendyk, Rotterdam, 143 bls., 103 coils.

CASEIN

Karolith Corp., Schodack, Bordeaux, 200 bags, 15,000 ks.
Kalbfleisch Corp., American Legion, Buenos Aires, 3,751 bags.

WOOD PULP

Buck, Kiaer & Co., Inc., Malaren, Stockholm, 1,200 bls. wood pulp.
1st Natl. Bank of Boston, Malaren, Stockholm, 300 bls. sulphite.
Scandinavian Pulp Agency, Inc., Malaren, Skutskar, 3,775 bls. wood pulp.
Atterbury Bros., Inc., Malaren, Gothenburg, 500 bls. sulphite.
Woodpulp Service Corp., Malaren, Gothenburg, 250 bls. wood pulp.
E. M. Sergeant & Co., Malaren, Gothenburg, 1,047 bls. dry soda pulp.
E. M. Sergeant & Co., Malaren, Gothenburg, 320 bls. wood pulp.
Price & Pierce, Ltd., Malaren, Gothenburg, 700 bls. wood pulp.
Bulkley, Dunton & Co., Berlin, ——, 4,000 bls. wood pulp.
E. J. Keller Co., Inc., Berlin, Bremen, 998 bls. wood pulp.
Woodpulp Service Corp., Berlin, Bremen, 2,250 bls. sulphite.
A. P. W. Paper Co., Cronshagen, Sheet Harbor, 11,267 bls. wood pulp, 1,258 tons.
Castle & Overton, Inc., Luossa, Hamburg, 2,041 bls. wood pulp, 305 tons.
E. M. Sergeant & Co., Stockholm, Gothenburg, 1,646 bls. dry soda pulp.
E. M. Sergeant & Co., Stockholm, Gothenburg, 180 bls. wood pulp.
Woodpulp Service Corp., Stockholm, Gothenburg, 250 bls. sulphite.
Atterbury Bros., Inc., Stockholm, Gothenburg, 250 bls. wood pulp.
J. Anderson & Co., Citos, Iggesund, 2,700 bls. sulphite, 475 tons.
J. Anderson & Co., Citos, Iggesund, 1,500 bls. sulphate, 300 tons.
E. M. Sergeant & Co., Citos, Iggesund, 3,000 bls. sulphite, 500 tons.
M. Gottesman & Co., Inc., Citos, Iggesund, 2,025 bls. sulphate, 405 tons.
Bulkley, Dunton & Co., Citos, ——, 6,050 bls. wood pulp, 1,100 tons.

WOOD PULP BOARDS

Hensel, Bruckman & Lorbacher, Pres. Roosevelt, Bremen, 80 bls.

WOOD FLOUR

The Burnet Co., Anaconda, Rotterdam, 1,000 bags.

BOSTON IMPORTS

WEEK ENDING JANUARY 21, 1928

Parsons & Whittemore, Inc., Malaren, Gothenburg, 635 bls. sulphite.
Johanson, Wales & Sparre, Inc., Malaren, Gothenburg, 425 bls. sulphate.
Price & Pierce, Ltd., Malaren, Gothenburg, 375 bls. wood pulp.
Beech Nut Packing Co., Malaren, Gothenburg, 153 bls. wrapping paper.
G. W. Millar & Co., Malaren, Gothenburg, 65 rolls wrapping paper.

(Continued on page 66)

The

ST. REGIS PAPER COMPANY

Daily Capacity 525 TONS

Newsprint
Catalog and Directory Papers
Fibre Wrapping Papers
Packers Oiled Manila
Specialties

General Sales Office

49 Wall St., New York

Farmers' Bank Bldg.
Pittsburgh, Pa.

A Coatesville Scotch Marine Type Boiler, self-contained, compact and allows low headroom — for burning Fuel Oil or Coal.

"Nearly 50 Years Experience in Steel Plate Construction"

During which time we've "designed and built" for the PAPER INDUSTRY: Boilers, Stacks, Tanks, Digesters, Riveted Pipe and various other Plate Work.

COATESVILLE BOILERS of various types and sizes have found their way into many PAPER MILLS throughout the U. S. A., and have, in every case, warranted their selection.

Literature and details regarding BOILERS and Steel Plate Work will be sent upon request.

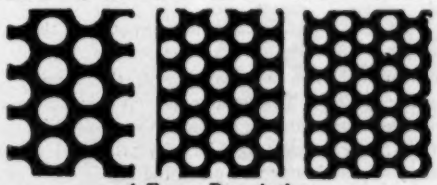
COATESVILLE BOILER WORKS

Boilers - Tanks - Steel Plate Work

Main Office and Works—COATESVILLE, PA.

Philadelphia 111 S. 15th St. | New York 30 Church St. | Boston 141 Milk St. | Pittsburgh Union Trust Bldg., | Baltimore Lexington Bldg.

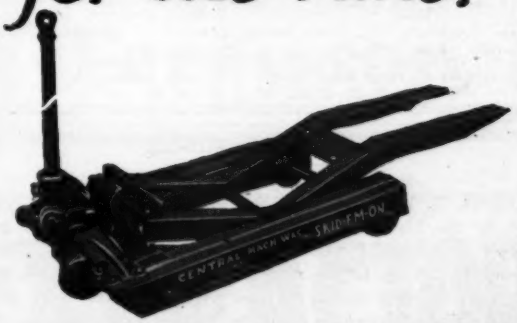
PERFORATED METALS



of Every Description
For Pulp and Paper Mills
THE HARRINGTON & KING PERFORATING CO.
5652 Fillmore St., Chicago, Ill.
NEW YORK OFFICE: 114 Liberty St.

SKID-EM-ON TRUCKS

Eliminate Damages to Paper Rolls for all Time!



The largest paper mills and warehouses now use SKID-EM-ON trucks for handling paper rolls—firms like Robert Gair Co., United Paper Board Co., Dill & Collins, Hinde & Dauch, and dozens of others. SKID-EM-ON TRUCKS will handle rolls quicker, with less effort and without danger to paper stock. Order one on 30 Days' trial at our expense. Made in two types—SIDE LOADER for long rolls in close quarters, narrow aisles and doorways; END LOADER for short rolls where aisles and doorways are amply wide. Built in 18 models and also made in special models on order. Write today.

CENTRAL MACHINE WKS.
437 South Senate Ave. Indianapolis, Ind.

Imports of Paper and Paper Stock

(*Continued from page 64*)

J. Anderson & Co., Malaren, Gothenburg, 4,225 bls wood pulp.

The Borregaard Co., Inc., Malaren, Gothenburg, 1,000 bls. wood pulp.

Train Smith Co., Pipestone County, Havre, 243 bls. rags.

Bulkley, Dunton & Co., Blydendyk, ——, 138 bls. wood pulp.

Bulkley, Dunton & Co., West Harcuvar, ——, 625 bls. wood pulp.

Parsons & Whittemore, Inc., Dania, ——, 300 bls. wood pulp.

Parsons & Whittemore, Inc., Dania, ——, 156 bls. wood pulp.

E. J. Keller Co., Inc., Nebraskan, ——, 176 bls. bagging.

Castle & Overton, Inc., West Campgaw, Germany, 1,889 bls. wood pulp.

PHILADELPHIA IMPORTS

WEEK ENDING JANUARY 21, 1928

Green, Hamilton & Co., Bellepline, Rotterdam, 75 bls. thread waste.

S. E. Ingber, Bellepline, Rotterdam, 186 bls. rags.

Baltimore Trust Co., Schodack, Bordeaux, 31 bls. rags.

Castle & Overton, Inc., Schodack, Bordeaux, 669 bls. rags.

Robert Blank, Schodack, Bordeaux, 218 bls. rags.

S. Birkenstein & Son, Schodack, Bordeaux, 201 bls. rags.

S. E. Ingber, Schodack, Bordeaux, 120 bls. rags.

E. J. Keller Co., Inc., Schodack, St. Nazaire, 45 bls. rags.

Equitable Trust Co., Ontario, Havre, 142 bls. rags.

E. J. Keller Co., Inc., Ontario, Havre, 499 bls. rags.

E. J. Keller Co., Inc., Ontario, Havre, 49 bls. new cuttings.

E. J. Keller Co., Inc., Ontario, Havre, 55 bls. bagging.

J. M. Jaffe, Ontario, Havre, 22 bls. rags.

Castle & Overton, Inc., Ontario, Havre, 298 bls. rags.

Castle & Overton, Inc., Bristol City, Bristol, 115 bls. rags.

J. A. Steer & Co., Bristol City, Bristol, 74 bls. waste paper.

National City Bank, Commercial Pilot, Buenos Aires, 417 bags casein, 25,020 ks.

S. Birkenstein & Co., Commercial Pilot, Buenos Aires, 13 bls. rags.

Stephano Bros., MacKeesport, Havre, 3 cs. cigarette paper.

J. H. Whitwell & Co., MacKeesport, Havre, 1 cs. wall paper.

E. J. Keller Co., Inc., MacKeesport, Havre, 464 bls. rags.

Leshner Paperstock Co., MacKeesport, Havre, 102 bls. rags.

Ayres W. C. Jones Co., MacKeesport, Havre, 76 bls. cotton waste.

E. A. Stone & Co., MacKeesport, Havre, 170 bls. rags.

V. Galaup, MacKeesport, Havre, 137 bls. rags.

Darmstadt, Scott & Courtney, MacKeesport, Dunkirk, 528 bls. rags.

Katzenstein & Keene, Inc., MacKeesport, Dunkirk, 140 bls. rags.

E. J. Keller Co., Inc., MacKeesport, Dunkirk, 546 bls. rags.

Leshner Paperstock Co., MacKeesport, Dunkirk, 103 bls. rags.

J. A. Steer & Co., MacKeesport, Dunkirk, 110 bls. rags.

Bulkley, Dunton & Co., Altmark, ——, 72 bls. rags.

Bulkley, Dunton & Co., Altmark, ——, 125 bls. wood pulp.

Bulkley, Dunton & Co., West Harcuvar, ——, 50 bls. rags.

E. J. Keller Co., Inc., Caledonian, Manchester, 107 bls. rags.

E. J. Keller Co., Inc., Blydendyk, Rotterdam, 145 bls. rags.

E. J. Keller Co., Inc., Manchester Hero, Manchester, 68 bls. bagging.

Castle & Overton, Inc., Exeter City, England, 108 bls. rags.

Castle & Overton, Inc., West Campgaw, Germany, 164 bls. rags.

Castle & Overton, Inc., Hannover, Germany, 130 bls. rags.

Castle & Overton, Inc., Hog Island, France, 122 bls. rags.

PORTLAND IMPORTS

WEEK ENDING JANUARY 21, 1928

Waterfalls Paper Mills Co., Malaren, Gothenburg, 4,651 bls. wood pulp.

Bulkley, Dunton & Co., Fredensbro, ——, 3,600 bls. wood pulp.

NEWPORT NEWS IMPORTS

WEEK ENDING JANUARY 21, 1928

A. P. W. Paper Co., Cronshagen, Sheet Harbor, 7,200 bls. wood pulp, 804 tons.

NEW ORLEANS IMPORTS

WEEK ENDING JANUARY 21, 1928

Castle & Overton, Inc., Vogesen, Germany, 416 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING JANUARY 21, 1928

National City Bank, Ontario, Havre, 237 bls. bagging.

National City Bank, Ontario, Havre, 353 bls. rags.

International Corp., Winona County, Manchester, 43 bls. rags.

Acer & Co., Astoria, Vancouver, 6,380 bls. wood pulp.

National City Bank, Winona, Genoa, 46 bls. rags.

Congoleum Nairn Co., Winona, Leghorn, 90 bls. rags.

Banco Com'l Italiane Trust Co., Winona, Naples, 112 bls. rags.

Phila. Girard National Bank, Winona, Naples, 87 bls. rags.

National City Bank, Winona, Naples, 652 bls. rags.

Congoleum Nairn Co., Eastern Dawn, Antwerp, 236 bls. rags.

S. Shapira & Son, Eastern Dawn, Antwerp, 261 bls. rags.

Bulkley, Dunton & Co., Mercier, ——, 750 bls. wood pulp.

Bulkley, Dunton & Co., Oswal, ——, 6,325 bls. wood pulp.

Bulkley, Dunton & Co., A. von Bayer, ——, 2,500 bls. wood pulp.

Bulkley, Dunton & Co., Milos, ——, 6,625 bls. wood pulp.

Washington Star, Humberarm, Cornerbrook, 975 rolls news print.

E. J. Keller Co., Inc., Blydendyk, Karlsruhe, 450 bls. wood pulp.

NORFOLK IMPORTS

WEEK ENDING JANUARY 21, 1928

E. Butterworth & Co., Inc., Eastern Dawn, Antwerp, 215 bls. bagging.

E. J. Keller Co., Inc., Eastern Dawn, Antwerp, 62 bls. rags.

JACKSONVILLE IMPORTS

WEEK ENDING JANUARY 21, 1928

Jacksonville Times, Humberarm, Cornerbrook, 1,248 rolls news print.

HOUSTON IMPORTS

WEEK ENDING JANUARY 21, 1928

Houston Post, Humberarm, Cornerbrook, 1,905 rolls news print.

Fort Worth Press, Humberarm, Cornerbrook, 474 rolls news print.

Houston Chronicle, Humberarm, Cornerbrook, 676 rolls news print.

Houston Transcript, Humberarm, Cornerbrook, 952 rolls news print.

Houston Times, Humberarm, Cornerbrook, 326 rolls news print.

Chief Engineer Missing

[FROM OUR REGULAR CORRESPONDENT]

CARTHAGE, N. Y., January 16, 1928—A reward of $200 is being offered by the Carthage Pulp and Paper Board Company and employees of the mill for information leading to discovery of the whereabouts of A. E. Lester, chief engineer at the plant, who disappeared mysteriously during the past week. Officials of the company stated that the rewards would be withdrawn February 1.

Mr. Lester disappeared from the mill and as soon as it was discovered he was missing the plant was immediately shut down and a search was directed by James Quinn, superintendent, and other officials without results. The plant remained closed until last Monday morning to allow a search of the river in the vicinity of the mill on the theory that Mr. Lester was drowned. No trace of the missing engineer has yet been found. Officials of the paper mill expressed the belief that Mr. Lester was a victim of amnesia and had wandered away from the mill.

Resigns From Gummed Products Co.

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, January 23, 1928.—Herbert S. Brown, sales manager of the Gummed Products Company at Troy, has resigned his position with the company, effective this week. He has also been serving as secretary of the concern and he relinquishes this post.

Officials of the company have not announced the selection of his successor.

Mr. Brown had been associated with the Gummed Products Company for 14 years. The greater part of this time was spent in Chicago as the representative of the Ohio concern in the Western metropolis. Several years ago he was promoted to the general salesmanagership and later was given the duties of secretary which he discharged faithfully.

Though he has not announced fully his future plans, it is reported that he may be connected with a new concern which is being planned.

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New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, January 25, 1928.

Trading in the local paper market continued to show signs of improvement during the past week. Demand for the various grades of paper was excellent and inquiries for future business were numerous. Prices are holding up to schedule in most instances. Sales forces of the leading paper houses are generally optimistic and the buying movement is expected to be in full swing before long.

News print continues in heavy demand and all signs point to further expansion in consumption in the near future. Most of the contract business has already been booked for the current year at the same quotations which prevailed in 1927, although there are reports of concessions on unusually large orders. The spot market remains moderately active.

Now that the inventory period has passed the board mills are becoming somewhat busier. Box board, especially, is in excellent request. Conditions in the fine paper market are fairly satisfactory and prices are being well maintained. No radical changes have been recorded in the coarse paper market although wrapping paper is beginning to move in heavier volume.

Mechanical Pulp

The ground wood market was fairly active during the past week. Both the imported and the domestic product were in somewhat better request. Shipments are going forward at a normal pace for the season. Producers are reported to have no undue accumulation of stocks to offer in the open market and prices are consequently steady to firm.

Chemical Pulp

Steadiness prevailed in the chemical pulp market during the week. Reports of the approaching settlement of the Swedish wood pulp conflict between the employers and the workers had little effect on the situation, as the news was counteracted by the closing of navigation on the Baltic. Quotations, in most instances, are being maintained at previously reported levels.

Old Rope and Bagging

Most of the business transacted in the old rope market during the past week was along routine lines. Imported manila rope is now offered at from 3.15 to 3.35 and domestic at from 3.75 to 4.00. Both foreign and domestic bagging are in slightly better request. Imported gunny No. 1 is now selling at from 1.65 to 1.75.

Rags

Mill demand for domestic rags has been rather restricted of late but now that the inventory season has ended general improvement in conditions is confidently anticipated. Prices continue to hold up in a satisfactory manner. Imported rags are in somewhat better request but due to the heavy consumption abroad prices are still rather higher than normal.

Waste Paper

The Paper stock market is in a fairly satisfactory condition. Book stock is still in particularly good demand and old kraft machine compressed bales are also in steady request. The board mills are beginning to evince more interest in the lower grades of waste paper now that the inventory period is over and a livelier market is expected shortly, in many quarters.

Twine

Little change was recorded in the twine market during the week. The business transacted was mostly along routine lines. Prices of most grades are being maintained at recently quoted levels. There has been some talk of concessions, but leading brokers are not likely to lower their prices without the demand for wrapping paper diminishes considerably.

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., January 25, 1928.—The Government Printing Office has received the following bids for 10,000 pounds of high finish sulphite manila jackets; United States Envelope Company, at $5.00 per M.; R. P. Andrews Paper Company, $4.94; Oles Envelope Corporation, $5.54; Sherman Envelope Company, $6.10 less 3 per cent; and Wold Detroit Envelope Company, $7.55.

The Printing Office has also received the following bids for 1,000 pounds of white stereotype molding paper in 24 inch rolls: Cauthorne Paper Company, at 10.23 cents per pound; Whitaker Paper Company, 11.25 cents; R. P. Andrews Paper Company, 15.75 cents; and Dobler & Mudge, 12 cents.

The Government Printing Office has received the following bids for 80,000 pounds of various sizes binders board: Whitaker Paper Company, at $70.00 per ton; Virginia Paper Company, $77.86; Barton, Duer & Koch Paper Company, $65.00; Dobler & Mudge, $61.00; and Mathers-Lamm Paper Company, $60.00.

The Printing Office has also received the following bids for 2,000 sheets of 22x28 inch gray photomount board: R. P. Andrews Paper Company, at $58.50 per M sheets; Charles G. Stott & Company, $63.10; Whitaker Paper Company, $60.55; and Barton, Duer & Koch Paper Company, $59.00.

Bids will be received at the Printing Office on January 27 for 18,550 pounds (100,000 sheets) of 25½x34—185½ white sulphite ledger paper.

The Government Printing Office will receive bids on February 3 for 33,550 pounds (500,000 sheets) of various sizes white sulphite writing paper.

Superintendents Meet at Hamilton

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, January 23, 1928.—Paper mill superintendents met Saturday evening at the Anthony Wayne hotel in Hamilton, with a good representation from most of the paper mill centers.

The Black-Clawson Company, manufacturers of paper machines, of Hamilton, sponsored the session, the entire program and entertainment having been under the supervision of this concern.

Officers of the Miami Valley Division of the American Paper and Pulp Superintendents' Association were greatly pleased with the manner in which the visitors were entertained and with the success of the program. There were several interesting speakers.

Much pleasure had been anticipated in the presence of Fred J. Roony, National president and great interest shown in the plans for the National Convention of the Association which will be held in Pittsfield, Mass., early this summer.

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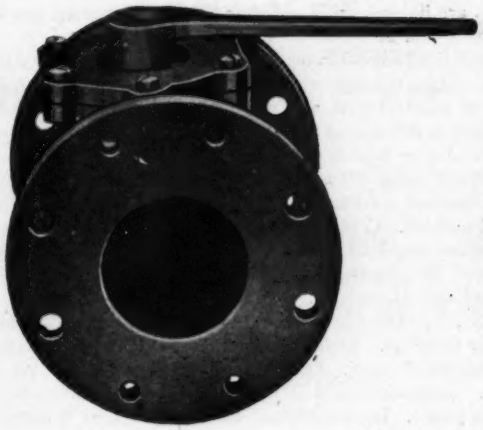

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Install this valve and note the difference.

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Machine & Tool Works
Green Bay Wisconsin
"Machinery Manufacturers"

Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, January 25, 1928.

Conditions in the local chemical market are improving steadily. A heavy volume of contract business has already been booked for the current year and inquiries for quick shipment are growing. Production is generally keyed to run a little ahead of consumption. Prices are holding up to schedule, in most instances, and there is not much talk of concessions around.

BLANC FIXE.—Trading in the blanc fixe market was fairly active during the past week. Both the pulp and the powder continue in good request and prices remain steady and unchanged. The pulp is still selling at $60 per ton, in bulk, while the powder is offered at from 4 cents to 4¼ cents a pound, in barrels, at works.

BLEACHING POWDER.—Demand for bleaching powder is about normal for the time of the year and the market is in a sound position. Contract withdrawals are moving at a good pace. Prices are unaltered. Bleaching powder is quoted at from $2 to $2.35 per 100 pounds, in large drums, at works, according to quantity and size of contract.

CASEIN.—The casein market is somewhat easier due mainly to heavier offerings. Both the domestic and the foreign product are in moderate demand. Quotations on domestic casein are slightly lower. Domestic casein is now selling at from 17 cents to 18½ cents a pound. Imported casein is offered at from 18 cents to 18½ cents a pound, all in bags, car lot quantities.

CAUSTIC SODA.—It is reported that a good proportion of the contract business in the caustic soda market for the current year has already been closed. Supplies are moving into consumption in good volume. Prices remain unchanged. Caustic soda is quoted at from $2.90 to $2.95 per 100 pounds. The flake and the ground are offered at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—Contract withdrawals of both imported and domestic paper makers' clay are going forward in a satisfactory manner. Prices generally remain steady and unchanged. Imported china clay is still selling at from $15 to $25 a ton, in bulk, ship side. Domestic paper makers' clay is offered at from $8 to $9 a ton, at mine, and pulverized at from $10 to $12 a ton.

CHLORINE.—Demand for chlorine is fairly active and an excellent volume of contract business has already been transacted for 1928 delivery. Prices remain unaltered. Chlorine is quoted at 3½ cents a pound, in tanks, or multi-unit cars, at works, on contract orders. The spot quotation ranges from 3¾ cents to 4 cents a pound.

ROSIN.—The rosin market fluctuated considerably during the past week and at the time of writing shows a marked decline. At the naval stores the grades of gum rosin used in the paper mills are now quoted at from $9.70 to $9.90 per 280 pounds, ex dock, in barrels. Wood rosin is selling at $7.65 per 280 pounds, southern shipping points.

SALT CAKE.—No radical changes have been recorded in the salt cake market of late. Supplies are about sufficient to take care of the prevailing demand and taking everything into consideration, the market is in a sound position. Salt cake is selling at from $18 to $19 a ton, in bulk, at works. Chrome salt cake is offered at from $14 to $15 a ton, in bulk, at works.

SODA ASH.—Shipments of soda ash continue to go forward in excellent volume. Most of the contract business for the current year has already been booked. The spot market has beeen fairly active lately. Contract prices of soda ash, in car lots, at works, rule as follows: in bags, $1.32, and in barrels, $1.55.

STARCH.—Demand for starch has been very heavy. Supplies are moving into consumption in excellent volume. Quotations are much firmer and, as anticipated for some time, advances have been recorded. Special paper makers' starch is now selling at $3.32 per 100 pounds in bags, and at $3.59 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Some improvement was noticed in the demand for sulphate of alumina during the past week. Contract withdrawals are moving at a steady pace. Prices are holding up to schedule. Commercial grades of sulphate of alumina are quoted at from $1.40 to $1.45 per 100 pounds. The iron free is selling at from $2 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—The sulphur market is in a strong position and the prevailing demand is exceptionally satisfactory. Supplies are moving into consumption in heavy volume. Prices remain steady and unchanged. Sulphur is selling at from $18 to $19 a ton, in bulk, at mine, according to quantity. The spot quotation is $20 a ton.

TALC.—Manufacturers of talc are experiencing a strong demand for their product from the paper mills. Prices are holding up to the levels which have been maintained for some time past. The quotation on domestic talc ranges from $16 to $18 a ton, in bulk, at eastern mines. French talc is offered at from $18 to $22 a ton, in bags, ship side.

To Start Bag Plant in Birmingham

BIRMINGHAM, Ala., January 16, 1928.—Birmingham's first new industrial plant in 1928 is a paper bag factory that will give employment to more than 30 persons. It will be located at Morris avenue and Forty-fourth street, in Commercial Park, a new industrial subdivision recently opened by E. M. Elliott and associates.

The Bates Valve Bag Corporation, of Chicago, is the owner and operator of the new plant, which will make bags for cement manufacturers. The company operates plants in a number of cities, but because of the increase in cement industry in the Birmingham district the last few years it was decided to put in a plant here to serve these.

The building to be occupied by the bag plant will be 60 by 219 feet, one story high, of brick construction. The Mackle Building Company has the contract for constructing the building which, under the terms of the contract, must be completed by February 23. Donald Park and F. O. Roland, of the Elliott Realty Company, negotiated the lease contract and the contract for the building. The Chamber of Commerce furnished information to the manufacturers relative to freight rates, distances and other things affecting its line of business.

The Bates Valve Bag Corporation took a five-year lease on the building with the privileges of an additional five years. E. M. Elliott is having the building constructed especially for the company.

The Bates Corporation says it is building the factory in Birmingham to supply the rapidly increasing demand for its products. The major product to be manufactured at this plant will be a multi-wall paper bag, a development of recent years which is said to have proved the most satisfactory container for cement, plaster, lime and other rock products.

"The initial unit," company officials say, "will be a factory modern in every respect, in a fire proof building that will contain space for the housing of the number of other products manufactured by the company, including filling machines used in cement, plaster, lime and other pulverized rock product. Wire used for closing cotton and jute bags and which also are used in connection with reinforcing concrete construction, will also be made.

Power Rights Filed for Wood Pulp Manufacture

PORTLAND, Ore., January 19, 1928.—H. L. Vance, acting as representative for industrial interests whose identity has not been made public, has filed with the Federal power commission an application for a preliminary permit to install a hydro-electric plant with an ultimate capacity of 21,000 horse-power, in the Mt. Hood National Forest. The sites named for the proposed plant are in Hood River and Multnomah counties, Oregon.

Plans for the project include the installation of three dams on Eagle Creek and the Lake branch of Hood River, and a pipe line and a power house near Cascade Locks, the power thus created to be used for the manufacture of wood pulp.

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BONDS	BID	OFFERED
Advance Bag & Paper, 7s 1943	105	107
A. P. W. Pulp & Power, 7s 1945	101	102
American Writing Paper, 6s 1947	80	82
Bastrap Pulp & Paper, 6½s 1940	100	103
British Columbia Pulp & Paper, 6s 1950	85	90*
Beaver Products Corp., 7½s 1942	106	109
Bedford Pulp & Paper, 6½s 1942	98½	None
Brown Paper Co., 1st 5½s 1946	96½	99
Bryant Paper Co., 6s 1942	100½	102
Cape Breton Pulp & Paper, 6s 1932	101	103
Central Paper, 7s 1933	85	None
Central Paper Serial 6, 6½s 1942	89	...
Champion Coated Paper, 6s 1926 to 1932	99	...
Champion Fibre, 8s 1930	100	...
Champion Paper Corp'n, 1st 6s 1945	95	97
Continental Paper Products, 6½s 1943	88	91½
Cornell Wood Prod., 7½s 1937	100	104*
Crown Willamette Paper, 6s 1951	100	102
Donnaconna Paper, 6s 1940	101	102½
Dells Paper & Pulp Serial, 6s 1926-38	*95	...
Eastern Mfg. Co., 7s 1938	89	91
Eddy Paper, 7½s 1931	101	103
Escanaba Paper Serial, 6s 1928	99¾	...
Filer Fibre Serial, 7s 1926-39	95	...
Fort Orange Paper, 7s 1942	99	102
Fox River Paper, 7s 1931	99	...
Gair Company, 5½s 1942	96	99
Gilbert Paper Co., 6½s 1926-29	91	None
Hammermill Paper, 6s 1939	100	103*
Hoberg Paper & Fibre, 7s 1937	94½	96
Itaska Paper & Prairie River Power, J+5½s 1926-38	99	101
Itaska Paper, 1st 6s 1933-38	99	101
Kalamazoo Veg. Parchment, 6s 1938	98	...
Marinette & Menominee, 7½s 1936	100	103
Menasha Printing & Carton, 6½s 1939	99½	...
Monroe Paper Products, 7½s 1932	96	...
Munising Paper, 6s 1927-36	96	100
Nekoosa Edwards, 1st Ref. 6s 1928 to 1942	96	99*
Orono Pulp & Paper, 6s 1943	98	...
Orono Pulp & Paper, 5s 1941	94	...
Oswego Falls Corp., 6s 1941	98	100*
Oxford Paper, 6s 1947	104	...
Paepcke Paper Mills, 7s 1930	99	None
Parsons Pulp & Lumber, 7s 1928	97	...
Parker Young Co., 6½s 1944	96½	98½
Paterson Parchment Paper, 6s 1938	100½	102
Penobscot Chemical Fibre, 6s 1942	98	...
Queens City Paper, 7s 1932	95	100*
Richardson Co., 6s 1938	100	...
River Raisin Paper, 6s 1936	96	...
Spanish River Pulp & Paper, 8s 1941	108	110
Stevens & Thompson Paper, 6s 1942	93	95
St. Anne Paper, 6½s 1946	99	101
St. Croix Paper, 5s 1926-37	95	98*
St. Regis Paper Serial, 6½s 1926-35	99½	101
Tait Paper & Color Industries, 6s 1934	90	95
Taggart Bros. Co., 6s 1944	95	97
Ticonderoga Pulp & Paper, 5s 1930	94	98
Ticonderoga Pulp & Paper, 6s 1940	99	101
Warren (The S. D.) Company, 6s 1945	99	101
Wotab Paper, 6½s 1943	102	...
Westfield River Paper, 7s 1926-43	91	...
Whitaker Paper, 7s 1942	106	108

STOCKS	BID	ASKED
American Box Board, Pfd.	8	10
American Box Board, Com.	8	10
Am. Tissue Mills, 7% Pfd.	90	93
British Columbia P. & P., Pfd.	54	58
Brompton Pulp & Paper, 8% Pfd.	100	102
Brown Corpn., 7% Pfd.	100	104
Champion Fibre, 7% Pfd.	106	112
Diem & Wing, 7% Cum. Pfd.	90	...
Eastern Mfg. Co., 1st Pfd.	28	33
Great Northern Paper, Com.	70	75
Hammermill Paper, 7% Pfd.	105	110
Hinde & Dauch, Com.	135	...
Hinde & Dauch, Pfd.	100	...
Holyoke Card & Paper	160	None
Marathon Paper Mills, Com.	125	...
Midwest Box Co., Pfd. 8%	94	98
Midwest Box Co., Pfd. 6%	92	97
Louis De Jonge Co., 7% Pfd.	93	96
Oxford Papers, Com.	160	170
Oxford Paper Co., Pfd.	105	108
Penobscot Chemical Fibre, Com.	65	75*
Richardson, 7% Pfd.	160	...
Rubberoid	74	77
Seaman Container, Class B (par $1)	1	None Off.
Seaman Paper Co.	Wanted	None Off.
St. Croix Paper	150	170
St. Regis Paper Co., 7% Cum. Pfd.	101½	104½
Westfield River Paper Co., 1st Pfd.	Wanted	None Off.
West Virginia Pulp and Paper, Com.	50	55
West Virginia Pulp & Paper, Pfd.	101	103
Whittaker Paper, 7% Cum. Pfd.	98	103

* Nominal.

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.25	@ —
Rolls, transient	3.25	@ 3.50
Sheets	3.65	@ 3.85
Side Runs	3.00	@ 3.75
Book, Cased—		
S. & S. C.	6.35	@ 7.75
M. F.	6.25	@ 7.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.10	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .85
Kraft	.90	@ 1.00
Manila	.75	@ .85
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	4.50	@ 4.75
Southern	4.25	@ 4.50
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

Boards—per ton—		
News	47.50	@50.00
Straw	53.50	@57.50
Chip	45.00	@47.50
Binders' Boards	70.00	@75.00
Sgl. Mla. Ll. Chip.	57.50	@60.00
Wood Pulp	80.00	@85.00
Container	67.50	@72.50

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—		
Moist	28.00	@30.00
Dry	32.00	@34.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@30.00
Screenings	15.00	@20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.40	@ 4.25
Easy Bleaching	2.65	@ 2.80
No. 1 strong unbleached	2.40	@ 2.65
Mitscherlich unbleached	2.55	@ 3.25
No. 2 strong unbleached	2.30	@ 2.40
No. 1 Kraft	2.55	@ 2.75
No. 2 Kraft	2.40	@ 2.50
Sulphate—		
Bleached	3.65	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.20	@ 4.75
Easy Bleaching Sulphite	2.60	@ 2.75
News Sulphite	2.40	@ 2.65
Mitscherlich	3.25	@ 3.70
Kraft (Domestic)	2.60	@ 3.30
Soda Bleached	3.25	@ 3.50
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.50	@ 1.85

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.75	@12.25
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.25	@ 7.75
New Unbleached	10.50	@11.00
Washables	4.25	@ 4.75
Fancy	5.50	@ 6.00
Blue Overall	6.75	@ 7.25
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.25	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.50	@ 1.60
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.95	@ 1.05

Foreign Rags

New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cottons	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50
New Mixed Cuttings	3.00	@ 3.50
New Dark Cuttings	2.75	@ 3.25
No. 1 White Linens	7.25	@ 8.00
No. 2 White Linens	5.50	@ 6.25
No. 3 White Linens	4.50	@ 5.00
No. 4 White Linens	3.00	@ 3.50
Old Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	1.90	@ 2.10
Dutch Blue Cottons	2.25	@ 2.50
German Blue Linens	2.50	@ 2.75
German Blue Cottons	2.00	@ 2.25
Checks and Blues	1.75	@ 2.00
Lindsay Garments	1.85	@ 1.95
Dark Cottons	1.65	@ 1.70
Shoppery	1.55	@ 1.60
French Blues	2.25	@ 2.50

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

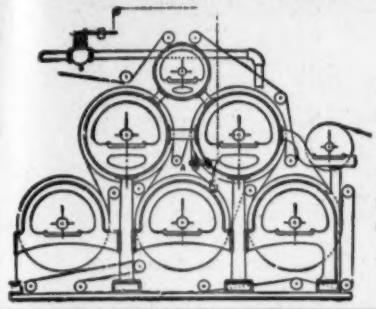
Gunny No. 1—		
Foreign	1.65	@ 1.75
Domestic	1.70	@ 1.75
Wool Tares, light	1.60	@ 1.65
Wool Tares, heavy	1.60	@ 1.65
Bright Bagging	1.60	@ 1.65
Small Mixed Rope	1.30	@ 1.50
Manila Rope—		
Foreign	3.15	@ 3.35
Domestic	3.75	@ 4.00
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.40	@ 3.65
Hard, White, No. 2	2.90	@ 3.05
Soft, White, No. 1	2.75	@ 2.90
Flat Stock—		
Stitchless	1.40	@ 1.45
Overissue Mag.	1.40	@ 1.45
Solid Flat Book	1.30	@ 1.35
Crumpled No. 1	1.05	@ 1.10
Solid Book Ledger	1.90	@ 2.10
Ledger Stock	1.70	@ 1.75
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.40	@ 2.60
New Cuttings	1.60	@ 1.85
Extra No. 1 old	1.25	@ 1.35
Print	.85	@ .95
Container	.70	@ .80
Bogus Wrapper	.75	@ .85
Old Kraft Machine Compressed bales	1.95	@ 2.05
News—		
No. 1 White News	1.70	@ 1.80
Strictly Overissue	.80	@ .90
Strictly Folded	.55	@ .60
No. 1 Mixed Paper	.45	@ .50
Common paper	.30	@ .35

The Pickles Drying Regulator



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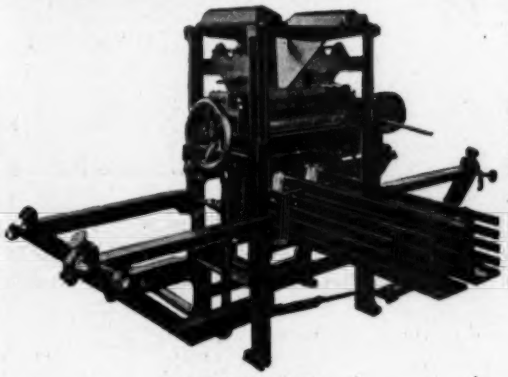

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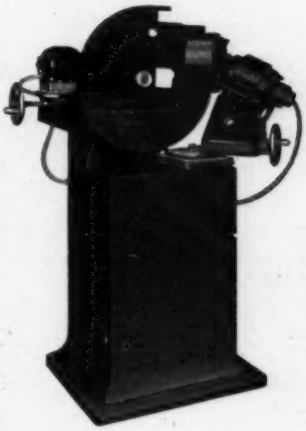

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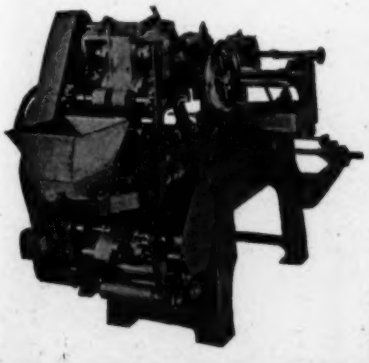

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Special Machinery Designed and Built

A. L. PARRISH,
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Twines

(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.21	@	.23
No. 2	.20	@	.22
Tube Rope—			
4-ply and larger	.18	@	.19
Fine Tube Yarn—			
5-ply and larger	.23	@	.27
4-ply	.24	@	.28
3-ply	.26	@	.30
Unfinished India—			
Basis	.16	@	.17
Paper Makers Twine			
Balls	.13	@	.15
Box Twine, 2-3 ply	.17	@	.19
Jute Rope	.21	@	.23
Ameri. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.18	@	.20
No. 2 Basis	.16	@	.18
Sisal Lath Yarn—			
No. 1	.16	@	.18
No. 2	.14	@	.16
Manila Rope	.24	@	.26

CHICAGO

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.35
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¼	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¼	@	.07¼
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
News—Roll, mill	.03½	@	.04¼
News—Sheets, mill	.03¾	@	.04¾
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.05¾	@	.06¼
Southern Kraft	.04½	@	.05
No. 2 Kraft	.05	@	.05¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¾
Manila Tissue—			
24x36 Sheet	.07	@	.07¾
White Tissue—			
20x30 Sheet	.07¼	@	.07½
Boards, per ton—			
(Delivered Central Territory)			
Plain Chip	45.00	@	—
Solid News	47.50	@	—
Manila Lined Chip	55.00	@	—
Container Lined—			
(Delivered Central Territory)			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers

(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.80	@	2.90
White Env. Cuttings	3.60	@	3.70
No. 1 Soft Shavings	2.50	@	2.60
No. 1 Mixed	1.00	@	1.05
No. 2 Mixed	.90	@	1.00
Ledger & Writings	1.55	@	1.65
Solid Books	1.20	@	1.30
Blanks	1.70	@	1.80
Krafts	1.90	@	2.00
New Kraft Cuts	2.25	@	2.35
Manila Envelope Cuttings	2.00	@	2.10
Ex. No. 1 Manila	1.50	@	1.65
Print Manila	.90	@	1.00
Folded News (overissue)	.60	@	.70
Old Newspapers—			
No. 1	.65	@	.75
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.70	@	.80
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper

(F. o. b. Mill)

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila	.08½	@	.09
Manila Sul., No. 1	.04½	@	.06
Manila, No. 2	.04	@	.04½
No. 2 Kraft	.05¼	@	.05½
No. 1 Kraft	.06	@	.06¼
Common Bogus	.02¾	@	—
Straw Board	60.00	@	65.00
News Board	47.50	@	50.00
Chip Board	42.50	@	45.00
Wood Pulp Board	4.50	@	5.00
(Carload Lots)			
Binder Boards—			
No. 1, per ton	85.00	@	90.00
No. 2, per ton	70.00	@	75.00
Carload lots	60.00	@	65.00
Tarred Felts—			
Regular	66.00	@	68.00
Slaters	70.00	@	72.00
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.55	@	1.70
Best Tarred, 3-ply	2.10	@	2.15
No. 1 Mixed Paper	.65	@	.70

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.11½	@	.12
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07½	@	.08
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable	.04	@	.04¼
Fancy	.05½	@	.06
Cottons—according to grades—			
Blue Overall	.07½	@	.08
New Blue	—	@	.04
New Black Soft	.05½	@	.06
New Light Seconds	.03	@	.03½
Khaki Cuttings	.04½	@	.05
Corduroy	.03	@	.03¾
New Canvas	.08	@	.09½
New Black Mixed	.05	@	.05½

Bagging

(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.75	@	2.00
Domestic	1.75	@	2.00
Manila Rope	3.50	@	4.00
Sisal Rope	1.25	@	2.00
Mixed Rope	1.10	@	1.25
Scrap Burlaps	1.50	@	1.75
Wool Tares, heavy	3.00	@	3.50
Mixed Strings	1.25	@	1.35
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	—	@	2.50

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.50	@	3.60
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.75	@	3.00
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.90	@	2.00
Writing Paper	1.65	@	1.75
No 1 Books, heavy	1.25	@	1.30
No. 2 Books, light	.85	@	.90
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	1.15	@	1.20
Container Manila	.90	@	1.00
Old Kraft	2.00	@	2.20
Common Paper	.55	@	.60
No. 1 Mixed Paper	.60	@	.75
Straw Board, Chip	.65	@	.75
Binders Board, Chip	.65	@	.75
Overissue News	.75	@	.85
Old Newspaper	.60	@	.70

Domestic Rags (Old)

White, No. 1—			
Repacked	4.50	@	5.25
Miscellaneous	3.50	@	4.00
White, No. 2—			
Repacked	.02¾	@	.02¾
Miscellaneous	.02	@	.02¼
Thirds and Blues—			
Repacked	2.50	@	2.75
Miscellaneous	1.60	@	1.75
Black Stockings	3.50	@	3.75
Roofing Stock—			
No. 1	1.75	@	1.80

BOSTON

Paper

(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
News	.03½	@	.04
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.05½	@	.06½
No. 2 Kraft	.04¼	@	.05
Common Bogus	.02¼	@	.02¾
Delivered New England points			
Straw Board, rolls .009			57.50
Straw Board in Sheets, basis 35s to 70s			54.50 @ 55.00
Filled News Board			47.50
Chip Board			45.00
Single Manila Pulp lined board			55.00 @ 60.00
Single White, patent coated board bender			75.00 @ 82.50
Wood Pulp Board			80.00 @ 85.00
Binder Boards			70.00 @ 75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots			65.00 @ —

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Hard White	2.75	@	3.10
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.60	@	—
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	1.95	@	2.00
No. 1 Books, Heavy	1.35	@	1.45
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	1.25	@	1.35
White Blank News	1.50	@	—
Old Kraft	2.00	@	2.10
Print Manila	.70	@	.80
No. 1 Mixed Paper	.50	@	.52½
Overissue News	.70	@	.80
No. 2	1.60	@	—
No. 3	—	@	1.35
No. 4	1.10	@	1.20
No. 5A	.90	@	1.00
B	.80	@	.90
C	.80	@	.90
Old Newspapers	.60	@	—
Box Board, Chip	.65	@	—

Bagging

(Price f. o. b. Boston)

Gunny No. 1—			
Foreign	1.40	@	1.50
Domestic	1.50	@	1.60
Manila Rope and Strings—			
Foreign	—	@	3.00
Domestic	—	@	3.50
Mixed Strings	.90	@	1.00
Scrap Burlaps	1.37½	@	1.50
Wool Tares, heavy	—	@	1.50
New Burlap Cutting	2.25	@	2.37½

Domestic Rags (New)

(Price f. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.11	@	.11½
Silesias, No. 1	.07	@	.07½
New Unbleached	.09½	@	.10
Fancy	.05	@	.05½
Washable	.04	@	.04½
Cottons—According to			
Blue Overalls	.07	@	.07½
Blue Overalls	.07½	@	—
New Black, soft	.04	@	.04½
Khaki Cuttings	.04¼	@	.05½
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)

(Price f. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	5.50	@	5.75
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Thirds and Blues—			
Repacked	2.00	@	2.12½
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.70	@	—
No. 2	1.50	@	—
No. 3	1.10	@	—
No. 4	1.10	@	—

Foreign Rags

(F. o. b. Boston)

Dark Cottons	1.60	@	1.65
New No. 1 Shirt Cuttings	11.00	@	11.50
Dutch Blues	2.00	@	—
Lace Curtains	5.25	@	5.50
New Checks & Blues	4.50	@	4.65
Old Fustians	1.80	@	—

TORONTO

Paper

(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¾	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09¾	@	.10
News f. o. b. Mills—			
Rolls (carloads)	3.25	@	—
Sheets (carloads)	3.75	@	—
Sheets (2 tons or over)	4.00	@	—
Book—			
No. 1 M. F. (carloads)	7.75	@	—
No. 2 M. F. (carloads)	7.50	@	—
No. 3 M. F. (carloads)	7.25	@	—
No. 1 S. C. (carloads)	8.25	@	—
No. 2 S. C. (carloads)	8.00	@	—
No. 3 S. C. (carloads)	7.75	@	—
No. 1 Coated and Litho	14.50	@	—
No. 2 Coated and Litho	13.50	@	—
No. 3 Coated and Litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.85	@	—
White Rag	5.25	@	—
"B" Manila	5.65	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.20	@	—
M. G.	7.35	@	—

Pulp

(F. o. b. Mill)

Ground wood	25.00	@	28.00
Sulphite easy bleaching	58.00	@	61.00
Sulphite news grade	55.00	@	58.00
Sulphite, bleached	75.00	@	—
Sulphate	65.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	3.00	@	—
White Blk, News	1.50	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.25	@	—
Light and Crumpled Book Stock	1.10	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.47½	@	.52½
No. 1 Mixed Paper	.60	@	—

Domestic Rags

(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.12	@	.12¼
Fancy Shirt Cuttings	.06	@	.06¼